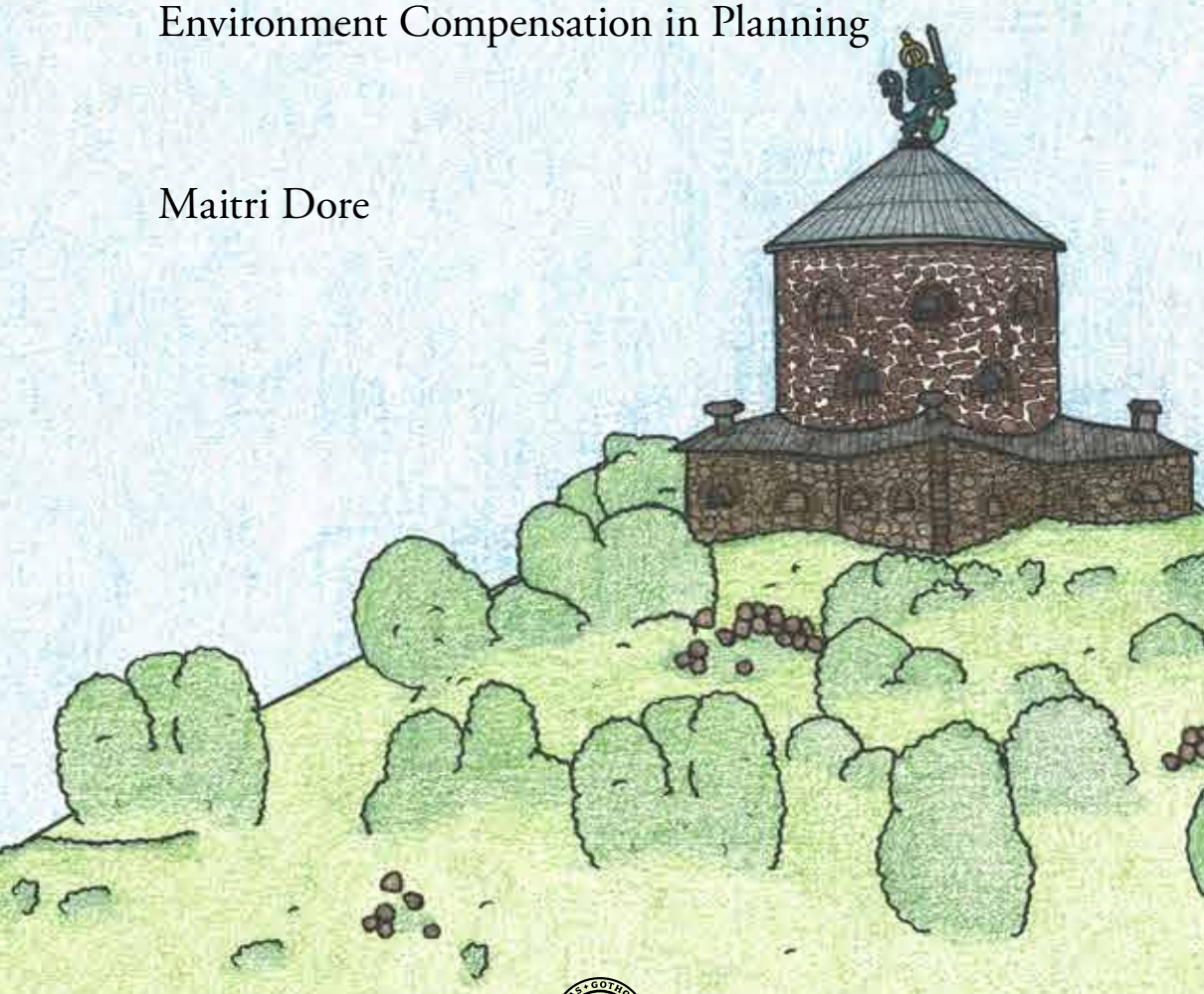
ACTA UNIVERSITATIS GOTHOBURGENSIS
GOTHENBURG STUDIES IN CONSERVATION 57

From Gone to Gain

Exploring the Scope of Historic Environment Compensation in Planning

Maitri Dore



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The illustration shows Skansen Lejonet, built as reinforcement to the fortified city of Gothenburg in the 17th century.

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Abstract

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Large planning projects inserted in old cities often cause physical loss of the historic environments they encounter. Public actors face the challenge of conserving these environments, while simultaneously considering planning needs for the future. Departing from an understanding of conservation as the dynamic management of change, the thesis explores "compensation" for historic environment loss in response to urban planning projects. To do so, it delves into law and policy, theory, and practice.

The thesis finds that in law and policy, the provision for compensation is severely inadequate, with environments largely being understood from the natural sciences perspective. This often connotes re-creation and/or relocation of the affected environments. In theory, historic environment compensation is inadequately researched, misunderstood, and often contested. And in practice, there are hardly any precedents for it. Given this background, the thesis fleshes out an understanding of compensation using two cases of large infrastructure projects that affect officially designated historic environments. The primary case is the West Link train tunnel in Gothenburg, Sweden, and the secondary one, the Mumbai Metro, in Mumbai, India.

Findings show the presence of compensation in the West Link and preservation in the Mumbai Metro. Compensation is an additive and change-oriented response. It can take the form of conveying stories through signage, design elements, displaying excavated remains, as well as by creating entirely new public spaces and programmes at the urban scale. This is in contrast to preservation in the Mumbai Metro, which focuses on preserving the physical and visual integrity of the affected historic environment. The responses in the cases

also reveal authorised views to varying extents, in the selection of certain historic environment values by experts.

Further, compensation and preservation are heavily mediated by their planning contexts. They emerge through negotiations, are dependent on various institutional and policy frameworks, regulations, multiple actors and their approaches and mandates, and several constraints associated with these. In this context, it is often a challenge to implement more change-oriented approaches to conservation. Nevertheless, compensation offers a dynamic alternative to managing change to historic environments in moments of major urban transformation.

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Chapter 1: Introduction

> "[…] it should never be forgotten that […] our first duty is not to renew [ancient buildings] but to preserve them. When, therefore, repairs are carried out, no effort should be spared to save as many parts of the original as possible, since it is to the authenticity of the old parts that practically all the interest attaching to the new will owe itself. Broken or half decayed original work is of infinitely more value than the smartest and most perfect new work." (Marshall, 1922: 10)

This was the dictum given by Director General of Archaeology in India, John Marshall, to officers charged with the task of building conservation, in his seminal *Conservation Manual* in 1922. To Marshall, preservation of historic buildings came first. Only if that failed, could reparation in the form of "new work" be embarked on.

Marshall saw the threat of "new work" in the form of a reparative dab of plaster here or there. But today, hundred years on, "new work" in relation to historic environments can take several different forms. A far cry for Marshall's concerns, "new work" in the form of urban planning projects, such as roads, railways, and skyscrapers, to name a few, are rapidly mushrooming in cities across the world.

Rapid urban growth is not new. However, the understanding of historic environments, and the approaches to their conservation are in constant development. Preservation à la Marshall's precepts were standard practice for conserving historic environments in Europe, but since the 1960s, this approach has increasingly been coming under scrutiny. As the definition of what constitutes historic environments worth conserving broadens, the "infinitely [greater] value" of "old parts" to "new" ones is no longer taken for granted. There has been a growing recognition of integrative ways of approaching the twin goals of conservation of historic environments and urban planning projects that affect them. And to this end both theory and policy have been evolving.

Conservation is increasingly understood as the dynamic and thoughtful management of change (Feilden, 1982: 3; Ashworth, 1991; Fairclough, 2008; Veldpaus et al, 2013: 11; Kalman, 2014), and "heritage planning", a theory and practice that seeks to conserve change itself (Ashworth, 1991: 26). Heritage planning involves the communion of old and new spaces, while keeping common

people squarely at the centre (Kalman, 2014). Accordingly, "heritage" is being defined as more than simply material objects or historic environments designated as valuable by experts (Smith, 2006; Harrison, 2013), and "values" connote the (essentially subjective) meanings that *people* attach to them (Mason and Avrami, 2002; Muñoz-Viñas, 2005). Consequently, conservation is being defined as an activity that seeks to conserve these *values* rather than the physical material of the environments themselves. Values are broad and not strictly defined by material features. Further, they are in constant flux and negotiated in the process of conservation.

The tectonic shifts in the approaches to conserving the historic environment are part of changing norms in history. As Ashworth (2011) notes, there is a shift from the "preservation paradigm" to the "conservation paradigm" to the "heritage paradigm". In his view, the preservation paradigm seeks to resist change to individual historic buildings, the conservation paradigm considers larger ensembles and reuse of historic environments in contemporary ways, and the most recent, heritage paradigm, acknowledges the socially constructed nature of heritage, the absence of inherent value in historic environments, and the common people who attribute value to them (Ashworth, 2011). The heritage paradigm (Ashworth, 2011) and heritage planning (Ashworth, 1991) offer clues for ways out of the constructed impasse between conservation and urban planning, to enable sustainable transformations of the environment as a whole.

Keeping in step with developments in theory, a number of international policy documents emphasising the need for integrating conservation and urban planning have been produced in the last few decades. Policy, too has shifted from an approach that values isolated historic buildings and objects to intangible heritage, wider contexts, and sustainable, holistic development (Veldpaus et al., 2013: 3). To borrow from the spirit of Unesco's (2011) policy on Historic Urban Landscapes, "when an urban settlement is properly managed, initiatives, opportunities, and development can contribute to both quality of life and conservation of cultural heritage, while ensuring a social diversity and justness" (Veldpaus et al, 2013: 13). Put simply, it is in the interest of society *as a whole* for conservation and urban planning to join forces.

Despite conservation in theory and policy being framed as an alliance between old and new, in practice, the wedge between conservation and urban planning endures to a significant extent. As research from over 70 countries reveals, professionals involved in the conservation and management of historic environments in cities see "conflicts between heritage needs and development

needs" as their biggest challenge (Getty Conservation Institute, 2010: 18). In India too, urban planning practice and conservation are still very much worlds apart (Menon, 2019).

The absorption of theory in policy, and policy in practice is patchy. However, new ways to conserve historic environments, through an understanding of conservation as the management of change rather than resistance to it, continue to develop. One such conservation response in the face of planning projects is "compensation".

Compensation in law, is in spatial terms, largely understood as the re-creation and/or relocation of the natural values of environmental loss due to planning projects. Increasingly however, compensation is also being discussed with respect to planning-driven loss of historic environments. In this arena, it is contested. One perspective sees it as an unacceptable response to loss of historic environments because it accepts their replaceability (Unesco et al., 2022: 60). Another perspective considers it a creative and dynamic response to inevitable change and a challenge to material-based preservation (Grahn-Danielson et al., 2013; Axelsson, 2015). The thesis departs from this second understanding of compensation. Seen thus, compensation involves a negotiation of historic environment values in the face of loss. It opens up the possibility for historic environments to play an active, agentic role in planning, thereby flying in the face of any conservation-urban planning binary.

Marshall in 1922 may have urged us to "never forget", to preserve at all odds. However, over time it has come to be well-established that dogmatic preservation is both untenable and undesirable, and further, that there are alternatives to such thinking. With compensation offering such a direction, the question then is: what can compensation mean when it comes to managing change to historic environments in moments of major urban transformation?

Aim and research questions

This thesis aims to explore compensation as the spatial negotiation of historic environment values in the face of loss caused by urban planning projects. It addresses this question from the various angles of law and policy, theory, and practice. With respect to historic environments, the research questions posed are:

- How is compensation understood in law and policy?
- How can compensation be understood in theory?
- How can compensation be understood in practice?

The research questions are addressed through both theoretical and empirical explorations. The first question deals with compensation as it is formally understood in (specifically Swedish) law and policy. The second question explores its theoretical understanding based on how it is characterised by scholars in planning research. The third question fleshes out compensation in planning practice by drawing on empirical data from two cases – the West Link train tunnel in Gothenburg, Sweden, and the Mumbai Metro in Mumbai, India. In moving from law and policy to theory to practice, each question attempts to develop the understanding of compensation further, finally ending with a discussion on how compensation can be further developed.

Definitions of terms

Heritage and historic environment

This thesis defers to the term "historic environment" instead of "heritage" to refer to physical environments, individual buildings, conglomerations, or sites, including green areas, that contain historic or cultural value. The word "heritage" is avoided when referring to these areas because it is a loaded term, understood differently based on its context. It can refer solely to the monumental or grand individual buildings, to listed buildings, to relics or past traditions, to the process of selection and interpretation of objects, and more. "Historic environment" on the other hand is more neutral, and as Pendlebury (2008: 2) states, simply denotes the fabric of daily life, whether these spaces are state-sanctioned or not. To avoid misunderstanding, "heritage" is mostly deployed in the literature review and analysis chapters, where its interpretation is clear based on context. Further, when used in the context of "heritage buildings" or "heritage precincts", in quotation marks, this is a reference to listed historic environments in the Mumbai Metro case.

In view of embracing the everyday, in fact, the word "historic*al*" would be more suitable than "historic", as the former simply means older in time, while the latter additionally connotes weighty importance. Yet, "historic" is used in multiple contexts in relation to the environment, as in "Historic Urban Landscapes" and the journal, The Historic Environment: Policy & Practice, neither of which are restricted to issues concerning the solely monumental. So, to avoid confusion, this thesis employs "historic environment". In some cases, "historic object" is used where the scale is smaller, such as with artefacts or excavated remains.

"Kulturarv" and "kulturmiljö"

Swedish policy documents use the terms "kulturarv" and "kulturmiljö". The former translates to "cultural heritage" in English and is an umbrella term for a number of tangible and intangible inheritances, including physical traces, objects, and customs, to name a few (National Heritage Board, 2021). "Kulturmiljö" translates, rather clunkily, in English to "cultural environment", and encompasses "the entire environment affected by humans, i.e., which has been characterised to varying degrees by various human activities and activities" (National Heritage Board, 2021). It is a subset of "kulturarv" and more specifically connected to a place or area, even if not necessarily physical (for example, the place names in an area are part of the "kulturmiljö") (National Heritage Board, 2021). While defined broadly as the everyday landscape and environment including intangible aspects, in practice, "kulturmiljö" tends to be interpreted as state-sanctioned environments.

In some official government English translations[1], "kulturmiljö" translates to "historic environment" which further makes the choice of "historic environment" in this thesis more valid. It bridges the English and Swedish concepts of the physical inheritances from the past, without getting entangled in connotations of what is state-sanctioned. This thesis does at times employ "cultural environment" to indicate a literal translation as used in Swedish documents (mostly related to law and policy) that have no official English translations. Regardless, "cultural environment" when used is meant synonymously with "historic environment" as understood previously.

Thesis outline

The thesis is structured in four parts. The first part lays out the basis for the research, the second and third parts address the three research questions, and the fourth part contextualises them within the wider field and offers new directions for research.

The first part consists of four chapters. Chapter 1 lays out the premise of the research, the aims, and questions. Chapter 2 is a review of existing literature in the context of conservation of historic environment values in planning, leading to the research gap in the form of compensation. Chapter 3 sets out the methodology for addressing the three research questions. Chapter 4 provides an overview of the

[1] The official translation for the Swedish law for cultural heritage, "Kulturmiljölagen", is "Historic Environment Act".

cases – the West Link and Mumbai Metro infrastructure projects, highlighting the issues concerning the historic environment.

The second part consists of two chapters, Chapters 5 and 6. Chapter 5 addresses the first question about compensation in law and policy. Chapter 6 addresses the theoretical interpretation of compensation.

The third part consists of three chapters, Chapters 7-10. Chapter 7 jointly analyses the empirical data from the two cases, the West Link and the Mumbai Metro. Chapters 8 and 9 analyse the case-specific findings of the Mumbai Metro and West Link, respectively. Chapter 10 is a theoretically driven analysis of the cases.

The fourth part of the thesis consists of one chapter. Chapter 11 concludes the thesis with a discussion on compensation through other theoretical lenses, offering future avenues for research on the subject.

Chapter 2: Literature review

To understand compensation in relation to loss of historic environments, it is important to map the context in which it emerges. Accordingly, this literature review focuses on conservation of historic environment values in planning. It unpacks these themes from a position of conservation as the potentially dynamic management of change, leading up to a case for investigating compensation.

The literature review is divided into four sections. The first section discusses conservation in the context of values, the second section discusses conservation in the context of planning, the third section looks at these together through conservation as the negotiation of values in planning, and the fourth section identifies compensation as a valid area of exploration to enrich current scholarship.

The literature review draws on the work of a number of conservation and planning theorists from the last few decades, from both the European and Indian contexts, notably, Muñoz-Viñas (2005), Mason and Avrami (2002), Pendlebury (2008; 2013), Ashworth (1991; 2011), Menon (2003), Mehrotra (2004; 2007), and Rönn and Grahn Danielson (2020), among others.

Conservation and values

Conservation of historic environments comes from an implicit or explicit recognition of their values. Over the decades, there has been a widening definition of what constitutes historic environments worth conserving and an interrogation of these values. Accordingly, this section reviews conservation in the context of values in two sub-sections: from a changing historical perspective, and from an investigation of historic environment values.

History: From material to people

Conservation is a broad umbrella term for various actions and approaches to dealing with historic environments and objects, since the institutionalisation of the activity. It covers preservation, restoration, repair, reuse, conversion, and renewal, to name a few (McGilvray, 1988, in Muñoz-Viñas, 2005: 8). Conservation is deeply entwined with change to historic environments. It is a response to what is

perceived as their undesirable loss. Framing this loss as damage, Muñoz-Viñas (2005: 101) writes that damage is crucial to conservation, since the threat or perceived threat of damage drives the activity, and without damage there would be no reason to conserve. Similarly, Hobson (2004: 28) notes that perceptions of negative change draw our attention to the past, potentially prompting a conservation response.

In its earliest institutional form, conservation was expressed through preservation of material, kicking in mainly as a response to industrialisation and urbanisation in late 19th century Europe (Ashworth, 1991: 15-16). Conservation, in the form of preservation, emphasises the historic environment's physical, material properties. Such conservation is classical conservation (Muñoz-Viñas, 2005), where authenticity of the historic environment or object is seen to lie in its materiality. Conservation in its earliest days also focused on historic environments that were considered grand, monumental, or of national importance (Lowenthal, 2015).

Conservation as material preservation travelled from Europe to other parts of the world via colonisation (Cleere, 1984). In India, for example, conservation was instituted as a formal practice by the British with the establishment of the Archaeological Survey of India (ASI) in 1861 which undertook the protection of nationally important monuments. Prior to that, indigenous practices of building with traditional materials and skills existed. These were not referred to as conservation but have persisted in contemporary times alongside formally instated colonial conservation (Menon, 2003; Menon, 2019). These are "two contradictory world views" (Thakur, 2012: 155-6). The colonial conservation paradigm, according to Menon (2003), sees authenticity as permanent, innate, and based in material. Authenticity, according to the pre-colonial paradigm, is constantly evolving, as regeneration of historic environments "accommodates 'authentic' contemporary interventions undertaken in the 'traditional' way" (Menon, 2003).

The world over, in the last few decades, the definition of historic environments in theory and policy, and what makes them worth conserving has been broadening. Previously, authenticity of historic environments was seen to lie in their material, physical properties. Now it is seen to lie in the meanings and values that *people* attribute to these environments. Historic environments worth conserving are not solely monumental and grand buildings but also seen to be everyday spaces, landscapes, practices, and traditions. "Heritage" itself has been undergoing a redefinition as being socially constructed and a process of selection and interpretation of the past, rather than a "thing" (Smith, 2006; Harrison, 2013).

Conservation in turn has been undergoing a dismantling of its solely material preservation outlook to a people-centred approach. Accordingly, the relationship between conservation and change to historic environments is no longer a straightforward response of resisting change. Instead, there is a shift towards understanding conservation as the dynamic and thoughtful management of change (Feilden, 1982: 3; Ashworth, 1991; Fairclough, 2008; Veldpaus et al, 2013: 11). As Ashworth (1991: 26) asserts, "the capacity to change must itself be preserved".

This sub-section reviewed a shift in conservation from a material focus to a values focus. The next sub-section takes a closer look at how values can be understood.

Values of the historic environment

Contemporary conservation, as Muñoz-Viñas (2005) defines it, focues on the meanings and significances attached to the environment or object rather than necessarily its material. In other words, values ascribed to historic environments are increasingly recognised as the core of conservation. Values are the subjective qualities of the historic environment (Mason and Avrami, 2002: 15) or "opinions about characteristics" (Mason and Avrami, 2002: 16). Assessing the different values that people attribute to historic environments is useful for decision-making and outcomes in relation to conservation (Mason, 2008: 305). Values offer direction for the purpose of conservation and the goals it seeks to achieve (Pendlebury, 2008: 216-7). Put simply, "societies only attempt to conserve the things they value" (Pendlebury, 2008: 7). This also means that when value is considered to be absent, conservation can lead to letting go of material, in an embrace of impermanence.

Historic environment values are broadly divided into their quality of being of the past and their current or contemporary significance. The former largely sees values to be inherent in material, while the latter is about contemporary uses and benefits. This distinction is seen as far back as in the work of Riegl (1903, in Jokilehto, 2018), as also more recently, in the work of Mason (2008), Ashworth (1997), and Pendlebury (2008).

Riegl (1903, in Jokilehto, 2018: 261) calls the two types of values "memorial values" and "present-day values". Memorial values include age value, historical value and intended memorial value, and present-day values include use value, art value, newness value and relative art value (Jokilehto, 2018: 261).

Mason (2008: 305) differentiates the two value sets as within "heritage values" and "contemporary values". Mason's (2008: 305) categories of values cover values as outlined in policy guidelines put forth by the Getty Conservation Institute. Mason and Avrami (2002: 16-17) in a Getty Conservation Institute document classify values into historical and artistic; social or civic; spiritual or religious; symbolic or identity; research; natural; and economic. In their understanding, historical values are a testimony to the passage of time, artistic values evoke sensory pleasure, social or civic values allow for grouping or collective or social action, spiritual or religious values relate to beliefs, symbolic or identity values are those that develop group identity, research values feed education and historical documentation, natural values provide ecological benefits and economic values, economic ones. Their classification, especially the categories of historical, artistic, and research values, is important for the later analysis of the empirical material in the thesis.

Mason's (2008: 305) categorisation sees "heritage values" as encompassing age value, value from historical association, cultural or symbolic value, aesthetic value, and others that are "the traditional core of conservation interest". These correspond to Mason and Avrami's (2002: 16-17) historical and artistic values, spiritual or religious values, symbolic or identity values, and research value. They are associated with the materiality of historic environments and translate to preservation. "Contemporary values", on the other hand, help in decision-making but have received less attention due to their seeming disconnect from the 'pastness' of the place (Mason, 2008: 305). These values are mentioned by Mason (2008: 305) as being economic, social, and environmental values, and correspond to Mason and Avrami's (2002: 16-17) social or civic values, natural values, and economic values. Though he sets out the categories of "heritage values" and "contemporary values", Mason (2008: 305) asserts that the two can be interrelated.

The way that Mason (2008: 315) distinguishes between value types covers the range of reasons for conservation, whether identified as "values" or not. "Heritage values" (Mason, 2008: 315), "intrinsic" qualities (Ashworth, 1997: 98), and "cultural values" (Pendlebury, 2008: 216) are largely equivalent to the physical material of historic environments. "Contemporary values" (Mason, 2008: 315), "extrinsic" qualities (Ashworth, 1997: 98) and socio-economic reasons for conservation (Pendlebury, 2008: 215) are largely based on the *uses* that historic environments yield. Ashworth (1997: 98) summarises the distinction in value types in how he describes "intrinsic" and "extrinsic" qualities. "Intrinsic" qualities are based on material authenticity and are supposedly self-evident and objective;

"extrinsic" ones prompt conservation of historic environments for what they can offer in terms of outcomes or benefits, rather than innate material properties (Ashworth, 1997: 98).

Benefits of historic environment conservation are also raised by Pendlebury (2008: 216) who refers to their social and economic potential. Benefits reflect the practical reasons for conservation, even though values such as architectural, historic, and archaeological values may have prompted listing of the historic environments in the first place (Pendlebury, 2008: 6). Benefits are often presented as arguments in favour of conservation, as proof of some tangible gain (Pendlebury, 2008: 216). In some cases, the benefits accrued from the conservation of a historic environment may *generate* values, such values being "incidental", as opposed to "fundamental" values that are independent of the benefits they engender (Pendlebury, 2008: 216).

Regardless of the boundaries of the concepts and how they are defined, the emergent theme is that historic environments are important, not only for their materiality, but for what they offer, whether called values, uses, or benefits. In keeping with Muñoz-Viñas (2005: 181), these categories are largely fluid and interchangeable. What is important to take away is that conservation is done for a reason.

Policy in both the Swedish and Indian contexts covers valuation of historic environments in its own ways. In Swedish policy, the *Plattform Kulturhistorisk värdering och urval (Platform for cultural-historical valuation and selection)* document produced by the National Heritage Board (2015) outlines recommendations on valuation. It is influenced by, among others, English Heritage (2008) and the work of the Getty Conservation Institute (de la Torre, 2002) (National Heritage Board, 2015: 9).

The document refers to values and aspects, among others, in relation to historic environments. "Kulturvärde" or "cultural value" is ascertained by considering a number of "aspects" of a place. These are cultural-historical, aesthetic, social, ecological, and economic (National Heritage Board, 2015: 13). While five "aspects" are listed, "cultural value" is considered to lie in a balance of three of them: the place's cultural-historical, aesthetic, and social aspects (National Heritage Board, 2015: 27). Further, "kulturhistoriskt värde" ("cultural-historical values") are the potential of tangible and intangible aspects of the environment that can contribute knowledge and understanding of people's lives – past and present (National Heritage Board, 2015: 12). "Cultural-historical value" is therefore akin to research value as defined by Mason and Avrami (2002: 17), in that both are

sources of knowledge about the past. Research value is important for the later analysis of the empirical material in the thesis.

In Indian policy, values under the rubric of "criteria" are identified for the purposes of listing historic environments. This valuation is within the planning system, to guide decisions about urban planning projects. Mumbai's Development Control and Promotion Regulations (DCPR, 2018: 448), which regulate construction in the city, list "criteria" as:

- value for architectural historical or cultural reasons
- the date and/or design and/or unique use of the building or artefact
- relevance to social or economic history
- association with well-known persons or events
- a building or groups of buildings and/or areas of a distinct architectural design and/or style historic period or way of life having sociological interest and/or community value
- the unique value of a building or architectural features or artefact and/or being part of a chain of architectural development that would be broken if it were lost
- value as a part of a group of buildings
- representing forms of technological development
- vistas of natural/scenic beauty or interest, including water-front areas, distinctive and/or planned lines of sight, street line, skyline or topographical
- open spaces sometimes integrally planned with their associated areas having a distinctive way of life and for which are and have the potential to be areas of recreation

Nearly identical "criteria" for listing are proposed in the national government's "model regulations" (Ministry of Urban Development, 2011: 6) and similar ones in their conservation guide to listing (Central Public Works Department, 2013: 5). The latter broadly cover historic buildings' symbolic associations with people or events, physical characteristics, and historical importance (Central Public Works Department, 2013: 5).

In both European and Indian contexts there is critique of how policy considers values. According to Pendlebury (2013: 715), despite the recognition of contemporary values in theory, policy in the English context still focuses on values as generated by the materiality of historic environments. He critiques Historic England's (2008: 27) document that sets out heritage values of a place as evidential, historical, aesthetic, and communal, for not counting "utility and market values" as "heritage values" (Pendlebury, 2013: 715). Hobson (2004: 254) makes a similar

analysis when he states that UK policy and practice focus on "intrinsic values", or those that can be deciphered by professionals as objective, particularly architectural features. "Extrinsic values" on the other hand are laypeople's associations with historic environments and are not necessarily in sync with policy and practice (Hobson, 2004: 254). Loosely, the distinction between "intrinsic" and "extrinsic" values (Hobson, 2004: 254) overlaps with "heritage values" and "contemporary" values, respectively, as defined by Mason (2008: 305).

In the Indian context, Jain (2010: 50) critiques the absence of an interrogation of values in policy and argues for a values-based approach, as outlined by the Getty Conservation Institute (Avrami et al., 2000). In her opinion, the values-based approach must be integrated into conservation guidelines in the charter on tangible and intangible heritage conservation by the heritage NGO, Indian National Trust for Art and Cultural Heritage (Intach) (Jain, 2010: 52). She further suggests the introduction of "continuity value" to recognise the value of the processual nature of traditional building practices that have evolved over time (Jain, 2010: 53).

While the values-based approach has many proponents, some scholars find it does not adequately consider heritage as intangible and living. Poulios (2010) and Walter (2014) critique the values-based approach for promoting a separation between the historical object of conservation and the subject, referring to a deadening of the past (Poulios, 2011: 181) and a "killing off" of what should be living (Walter, 2014: 645). For Taylor (2015: 66) too, the values-based approach relegates "heritage" to an object-based embodiment of values, rather than values as constitutive of heritage itself. Walter (2014) is additionally critical of the values-based approach for its lack of theoretical interrogation of the methodology used in identifying values in the first place.

Poulios (2010; 2011) considers the values-based approach as inapplicable to "living heritage" sites, i.e., those that emphasise continuity or change to the environment. He further critiques it on the grounds that despite its encouragement of multiple stakeholder perspectives, in practice, it still privileges conservation professionals and attachment to tangible built environments (Poulios, 2010: 174). Intangible elements are seen to be served through the conservation of tangible ones (Poulios, 2010: 174). By this yardstick, historic environments only serve as backdrops to the people of the present rather than being entwined *with* them. Poulios instead advocates a "living heritage approach" for sites that are based in continuity of function, process of maintenance, and original communities (Poulios, 2010: 175). For him, change and continuity are the hallmarks of "living heritage" sites (Poulios, 2010: 178).

Despite valid critique of the values-based approach, as McClelland (2018: 4) notes, the alternatives are not adequately fleshed out for use in practical conservation decision-making. Further, the case studies in the thesis lie within the formal planning context outside the ambit of "living heritage" as elaborated by Poulios (2010). For this reason, understanding how values are identified and assessed is a useful starting point for exploring conservation of the affected historic environments in relation to their loss.

Overall, there is a vast body of literature and policy that considers values (in whatever form) of the historical environment as a driver in conservation-related decision-making. The identification of values is relevant in the conservation of historic environments and objects where environments have values, whether heritage or contemporary, intrinsic or extrinsic. The increasing recognition of values forms part of contemporary conservation. This has come a long way since classical conservation, which took the form of material preservation that first emerged in 19th century Europe.

Conservation and planning

Conservation of historic environments can be a response to change due to planning projects. It is therefore important to understand conservation from a planning perspective. Over the decades, there has been a shift in considering conservation from the perspective of individual buildings to that of sites, with the activity having become embedded in planning.

This section reviews conservation's relationship to planning in three sub-sections: first, from a historical perspective of conservation coming to be a part of planning, second, through some of the ways in which the integration between conservation and urban planning can be theorised, and third, through a review of the changing approaches to conservation with respect to planning.

History: From building to site

Conservation began to become entangled with planning policy in Europe in the 1960s and 70s (Pendlebury, 2008: 168; Ashworth, 1991: 22). This meant a shift from conserving individual historic monuments in isolation, to incorporating function into the conservation activity. Historic buildings began to be conserved in their wider contexts which included consideration of services like traffic management and land-use (Ashworth, 1991: 21). The role of the town planner began to subvert that of the architect and art historian (Ashworth, 1991: 21). This

inclusion of conservation in planning became the norm for most western European city centres that came to have some form of conservation designation (Ashworth, 1991: 22).

The reverberations of developments in the western world were experienced in India in the 1980s. There were a number of developments during this period that widened the notion of conservation from individual monuments and buildings to wider ensembles and an expanding understanding of historic environments worth conserving. The Indian National Trust for Arts and Cultural Heritage (Intach), was established (along the lines of the UK's National Trust), and sought to work with legally unprotected historic environments, beyond the mandate of the colonially established Archaeological Survey of India (ASI) (Menon, 2003). Intach sought to fulfil its aims with the help of English experts, one of whom was Bernard Feilden (Menon, 2003), an early proponent of conservation as the dynamic management of change (Feilden, 1982). Feilden played a key role in the widening view of conservation of India (Menon, 2003; Baig and Mehrotra, 2012: 10; Piplani, 2012: 84). He drafted the conservation guidelines for India in 1989 that were published by Intach, set up a seminal conservation programme in York that spawned a new generation of Indian conservation architect graduates (some of whom later pioneered heritage activism in Mumbai in the 1990s), and also a number of conservation programmes in India (Baig and Mehrotra, 2012: 11). These developments were a turning point in reorienting the thinking around conservation of historic environments in India.

This sub-section reviewed the overall shift in conservation from individual buildings to wider sites and concerns. The next sub-section takes a closer look at how conservation and urban planning interact.

Integration of conservation and urban planning

Ashworth (1991: 3) theorises the integration of conservation and planning through "heritage planning". Heritage planning (Ashworth, 1991: 3) lies in the overlap of the built environment (urban form), uses (urban function), and area strategies (urban planning), as seen in Figure 1. "Uses" connotes, "the valuation placed upon survivals from the past", i.e., the use of the built environment in planning strategies, for example tourism (Ashworth, 1991: 4). Since it lies in the overlap of these three aspects of the urban, heritage planning does not favour any one of them (Ashworth, 1991: 5).

Figure 1: Heritage planning

Source: Ashworth (1991: 3)

Heritage planning (Ashworth, 1991) ties into "conservation planning" (Pendlebury, 2013; Pendlebury et al., 2014). This is another variation of theorising the interaction between historic built environments and urban planning projects. Conservation planning largely emerges from the embedding of architectural conservation within urban planning processes (Pendlebury et al, 2014: 44). Conservation planning is a move from resistance to change and conservation of individual pieces of architecture, to considering conservation as an intrinsic part of planning, with all the other changes and processes, policies, and institutional frameworks that come with urban planning (Pendlebury, 2013: 710). Conservation planning works *with* change as opposed to against it (Pendlebury, 2013: 710).

Arguments for change-oriented ways of thinking about historic environments in the broader context of urban transformations are advanced more conceptually, in relation to urban sustainability as well. This is seen in the "deep cities" approach (Fouseki et al., 2020). "Deep" connotes dealing with multiple temporal layers of a city to enable sustainable transformations that speak not only to green environments but also socio-economic issues. For Fouseki et al. (2020: 6) transformation itself can be a "heritage value", regarded as less of a threat and more as a prompt for considering sustainable development in theory and practice. The deep cities approach considers all the elements that go into making cities – cultural, natural, past, contemporary, tangible, and intangible (Fouseki et al., 2020: 261).

Change-oriented conservation takes on additional dimensions and challenges in the Indian context, where hybridity exists in both conservation practices (Menon, 2003; Thakur, 2012) and urbanism (Mehrotra, 2004; Mehrotra, 2007). The authors argue for embracing change in both the individual disciplines of conservation and planning, as well as their coming together in a way that is suitable to both their dualities. This scholarship also has its basis in resisting wholesale consumption of received colonial and western norms of both conservation and planning while also considering ways for them to coexist with local practices (Menon, 2017b). At the same time there is acknowledgement of the "culturally Janus-faced", hybrid identity of many Indian professionals who straddle Eurocentric and Indian sensibilities (Menon, 2008).

Menon (2019: 44) suggests the application of Bhabha's (1994, in Menon, 2019: 44) "hybrid modernity" to both conservation and urban planning, conceptualising this as a blend of contemporary and traditional approaches that needs to be recognised and adopted by policy-makers and practitioners of various stripes. He argues for conservation to embrace pre-colonial building traditions that allow for rebuilding and regeneration in addition to colonially-inherited monument preservation (Menon, 2003). These aspirations for conservation were crystallised in the Intach charter (2004) that he helped draft (Menon, 2008). The charter advances guidelines that bring together the conservation of monumental as well as everyday historic environments, as also traditional building practices.

Conservation further holds clues for an urban planning that can adequately respond to the plurality and complexity of Indian cities (Menon, 1997: 2935). Menon (1997: 2935) pushes for "conservation-oriented development" wherein urban planning is embedded in the local context rather than in an imposition of western models. According to him, the objective should broadly be "improved quality of life at the local level, sustainable development at the level of society, and 'people-first' approaches to problem-solving in general" (Menon, 1997: 2935). He cites Intach's "heritage zone" policy as a good example of how conservation and urban planning can work together in practice (Menon, 1997; Menon, 2017b). It works within urban planning policy, is amenable to change of historic environments (while retaining what makes them valuable), and is oriented towards their improvement (Menon, 2003). According to Menon (2003), the "heritage zone" – developed based on the case at hand – is a positive shift from regulations like those of the Archaeological Survey of India (ASI) that forbid planning projects within a 100m radius of protected monuments.

There is further a push for conservation and urban planning to meet in ways that are sensitive to the complexity of urbanism itself. In such cases, urban planning is fluid, and embraces the informal, the historic, and the constantly fluctuating nature of cities, in what Mehrotra and Felipe Vera (2016) call the "urbanism of detachment". The urbanism of detachment mediates and negotiates the various forces in a city (Mehrotra and Filipe Vera, 2016: 19).

Mehrotra (2004; 2007) theorises the dual nature of Indian cities. He characterises this as the "static" or formal city and the "kinetic" or informal, temporal one (Mehrotra, 2004; Mehrotra, 2007). The former is its grand and fixed architecture and is associated with formal urban planning. The latter is spontaneous and arises in the interstices – the street vendors, hawkers, pop-up festivities, and so on (Mehrotra, 2007: 343). According to Mehrotra (2007: 346), the static city must bend to accommodate the increasingly dominant kinetic city. He advocates their simultaneous legitimacy, and for them to coexist so that diversity of urban life and contemporary uses can thrive (Mehrotra, 2007: 354). As he writes, urban planning must recognise the changing nature of urban space and design needs to be flexible (Mehrotra, 2020: 135).

For Mehrotra (2007: 346) conservation as an embrace of change is deeply connected to the motions of the kinetic city, wherein cultural significance, understood as historic environment values, is not static but in constant flux. This poses a challenge to material-focused conservation (Mehrotra, 2007: 346). For him, recognising the changing nature of cultural significance (and its representation in processes) is a means to reframe conservation as the management or facilitation of change, and the conservator as an active agent in the process (Mehrotra, 2004: 31; Mehrotra, 2007: 352-3). Change, by way of the fluctuations of the kinetic city, is inevitable and embracing it, the only way forward (Mehrotra, 2004: 30). He argues for moving beyond thinking of conservation through the lens of loss but in terms of opportunity, despairing at current conservation efforts responding "to any sort of new condition as worse than some 'magic moment' in the past" (Mehrotra, 2004: 26; 2007: 347). Change has the potential to become a resource in conservation efforts (Mehrotra, 2004: 29).

> "Essentially, conservation efforts around the world, however they might be disguised, are about making our transition into the future more gentle, for change is inevitable, and cultural significance always evolving." (Mehrotra, 2004: 30)

The views on conservation emerging from the Indian context, while they may be different in their particularities, echo similar goals for working with change to historic environments as elsewhere in the world.

This sub-section reviewed the calls for the integration of conservation and urban planning. The next sub-section expands on how the approaches to conservation with respect to planning have changed over time.

Changing approaches to conservation

The various and changing approaches to conservation of historic environments in planning are theorised by Ashworth (2011) as being within three "paradigms": the preservation, conservation, and heritage paradigms. This classification forms an important part of the analysis, later in the thesis.

The preservation paradigm is based on protection of existing historic environments and attempts to mitigate their damage or loss. Change is viewed as anathema because exercising change will diminish the value of the historic environment by way of material fabric (Ashworth, 2011). The result is "spatial fossilisation", which entails the spatial separation of planning projects from preserved historic environments for risk of the latter being harmed (Ashworth, 2011: 8).

The conservation paradigm is a shift away from material preservation for its own sake to the incorporation of function, as well as the consideration of ensembles rather than individual elements of the built environment (Ashworth, 2011). Looking at a larger scale makes functionality hard to ignore, and this way of dealing with historic environments draws in a larger number of professionals into their conservation (Ashworth, 2011: 9).

The heritage paradigm entails active and dynamic use of the past in the present, while acknowledging a potentially different future (Ashworth, 2011). This paradigm is rooted in contemporary needs and recognises that these are constantly changing in an ever-changing society (Ashworth, 2011). The heritage paradigm emphasises creativity over the use of an already preserved resource (Ashworth, 2011). With historic environment value being considered socially constructed, the heritage paradigm opens up the field for liberating them from their listings, in the spirit of enabling the future "to make its own choices rather than to be imprisoned in the choices of the past" (Ashworth, 2011: 11). The conservation and heritage paradigms characterise the integration of conservation and urban planning in ways discussed in the previous sub-section.

Ashworth's (2011) preservation, conservation, and heritage paradigms overlap with Janssen et al.'s (2017) "heritage as a sector", "heritage as a factor", and "heritage as a vector" conceptualisations. These are three ways in which they conceptualise the intersections of the historic environment with planning in the Dutch context. Heritage as a sector considers socio-economic and social change as a threat to the historic environment (Janssen et al., 2017: 1660). In this situation, conservation is change-averse, and the monument becomes a familiar crutch in a rapidly changing world (Janssen et al., 2017: 1660). Heritage as a factor considers the historic environment as one of many factors that go into determining the quality of a place. Here, the historic environment is seen in the context of other considerations like contemporary needs and funding (Janssen et al., 2017: 1662). In this view, integration of the historic environment and urban planning is tenable, with the former having the ability to enrich the latter (Janssen et al., 2017: 1661). Heritage as a vector considers the historic environment in the widest of terms, with its intangible aspects and embedded stories, which can drive and contribute to the co-creation of new spaces (Janssen et al., 2017: 1663). This approach is the broadest of the three in scope, with the fragmentation of the conservation activity and inclusion of the wider public in dealing with historic environments (Janssen et al., 2017: 1664-5). Here the historic environment plugs into other fields, like economics, safety, and sustainability (Janssen et al., 2017: 1665). The authors characterise the shift in approaches as moving from a position of viewing historic environments through the lens of loss to one of gain (Janssen et al., 2017: 1658).

According to both Ashworth (2011) and Janssen et al. (2017) the development of these approaches has been chronological, however, old modes of conceiving of the historic environment endure, even as new ones emerge. Ashworth (2011) terms this an "incomplete paradigm shift" and Janssen et al. (2017: 1656) argue that the approaches have been adopted by different actors despite evolving in consecutive order. They argue that a mixed bag of approaches is both present and necessary in contemporary heritage planning (Janssen et al., 2017: 1656).

Overall, this section has shown that there has been a shift in conservation from a focus on individual buildings to wider environments and contemporary concerns. Further, conservation has come to be embedded in planning processes and interacts with urban planning in less and more change-oriented ways.

Conservation as the negotiation of values in planning

Previous sections discussed conservation in the context of historic environment values and planning. This section looks at the three themes collectively, through conservation as the negotiation of values triggered by urban planning projects. The section focuses on the subjectivity of values and the way they are implicated in planning, with cases from practice.

Values attached to historic environments are essentially subjective and change over time and with changing attitudes. According to Pendlebury (2008: 215), where previously, values were linked to the past and of being special, in contemporary times, they are of the ordinary and everyday, the latter offering "continuity and familiarity in the built environment". Further, conservation itself casts value on an environment (Pendlebury, 2008: 7), making the relationship between value and conservation non-linear. This is linked to the notion of "heritage creation" where assigning values and identifying an object or environment *as* heritage renders it valuable (Pendlebury, 2008: 7). Ashworth (1997: 98) too notes that "extrinsic" qualities of the built environment are based on various social, political, or economic benefits and are in constant flux (Ashworth, 1997: 98).

Conflicts in value judgement have been the hallmark of conservation since its institutionalisation (Jokilehto, 2018: 30). Where decisions must be made, evaluating heritage objects is tricky due to their mutating nature, people holding often opposing values towards them, and the difficulty in evaluating them on a single scale. In the values-based assessment, values are acknowledged as being hard to quantify (Mason and Avrami, 2002: 16). Assessment is followed by negotiation which involves questions of how these various values are prioritised and balanced between the various people and institutions concerned with the environment or object in question (Mason and Avrami, 2002: 23-4). It is about optimising and finding an equilibrium among values (Mason and Avrami, 2002). As the authors stress, "balancing" the values is the core of such an approach (Mason and Avrami, 2002: 23-4). This part of the process raises issues of inconsistency in the unit of measurement of these values (such as in monetary currency, in symbolics terms, etc.), as well as conflicts arising from the prioritisation of some values leading to a diminishing of others (Mason and Avrami, 2002: 24). While the process is clearly set out, the values-based approach lacks the tools and methods for its operationalisation, and empirical data to inform its implementation (Mason and Avrami, 2002: 19).

The assessment and ascription of values are further entangled with those doing the assessment (Mason and Avrami, 2002: 16), and it remains a challenge to incorporate a wide range of participants in the process (Mason and Avrami, 2002: 23). For Muñoz-Viñas (2005: 204), the conservator – as the expert – has a moral responsibility to negotiate conflict between various values. However, this can be untenable because of the expert's own authoritative role. As Hobson (2004: 254) notes, interpretations of values in planning by professionals or experts differ from those of laypeople. Professionals too differ in their interpretations. However, they consider their judgement as objective in comparison to those of laypeople, and collectively agree on their expertise, in what Hobson (2004: 257) calls a "rolling consensus".

In practice, planning projects set in motion an explicit or implicit negotiation of values, and further reveal the fluid, often conflicting nature of values. Pendlebury et al. (2014) note the presence of a conflict in values where climate change mitigation goals encounter conservation goals in planning. In two cases, retrofitting buildings with photovoltaics is weighed against the potential threat they pose to the aesthetic value of the historic environment (Pendlebury et al., 2014: 49). There is a further conflict in the two policies for each of the goals, resulting in an awkward decision-making process in planning where different authorities accord value differently (Pendlebury et al., 2014: 49).

Conflicting values are also seen in the urban transformation of the town of Kiruna in northern Sweden. The town is a listed historic environment and also a rich source of iron ore. Here, mining has been ongoing for over a hundred years. In this context, government authorities took a decision to move the town so mining could continue beneath it unabated. Sjöholm's (2016: 16) doctoral thesis shows how the plans to uproot the entire town spurred a re-evaluation of its historic environments in the planning process. What ensued was that some parts of the historic environment continued to be considered officially valuable, while others lost their officially designated value, in what she characterises as heritagisation, re-heritagisation, and de-heritagisation.

Overall, the conservation of historic environments in planning is complex and multifaceted, and involves the negotiation of a number of factors, actors, and interests. It has blurry boundaries involving several fields, including law, tourism, and politics, to name a few (Muñoz-Viñas, 2005, 10-11) and mobilises various discourses (Oevermann and Mieg, 2014: 4; Nyström, 2021). As Fredholm (2017) characterises it, heritage planning, by way of dealing with historic environments in

planning, is a wicked problem due to the inherent dissonance and complexity of the activity, and the impossibility of a definitive resolution.

The simultaneous changing approaches to historic environments and their conservation, as well as the integration of conservation in planning is accompanied by difficulties in negotiating values during planning. Building on the ideas discussed so far, the next section raises compensation as relevant to further exploring the negotiation of values in response to urban planning projects.

Compensation as an area of exploration

Compensation as a response to planning projects implicitly or explicitly involves the recognition of the values of the environment. In this way the study of compensation builds on existing literature on conservation of historic environment values in planning, reviewed in previous sections. Compensation is therefore a legitimate area of exploration. This section introduces compensation and prepares the ground for the focus of the rest of the thesis.

Compensation, in linguistic terms, means to "counterbalance, make up for, make amends for" (Oxford English Dictionary, 1989). There is a strong element of making equal in some or other way. Compensation is found in law and policy in relation to the spatial re-creation/relocation of lost or damaged environments having natural values. Though considered the least preferred action in case of such loss, it is seen in a positive light, as a way to counter the negative effects of damage from planning. The European Commission believes that of the 100,000 hectares of land lost to planning projects every year, 50-100,000 hectares should be compensated (GHK Consulting Ltd, 2013, in Persson, 2014: 8).

In the case of historic environments, however, compensation is severely under-researched and is still a topic of exploration in theory and planning practice. To some extent it is discussed in monetary terms, as in the "compensation for elimination" metric that measures how much money people would accept for total elimination of a historical site (Ben-Malka and Poria, 2019). And more generally in the cultural heritage domain, it is present in claims to restoring justice in the realm of repatriation of material culture, through recognition, economic reparation, and return (Joy, 2020: 2).

The little available research on spatial compensation for historic environment loss comes from Magnus Rönn, Benjamin Grahn Danielson and Stig Swedberg, who study the Swedish planning system. They attempt to reframe compensation as a valid and positive response to managing inevitable historic environment loss.

The authors take from the conceptual understanding of the term as "indemnifying, balancing, settling, restoring and reaching a balance" (Rönn and Grahn Danielson, 2020: 7). As they characterise it, compensation in formal planning can kick in as a response to undesirable change or loss of historic environments (Rönn and Grahn Danielson, 2020: 7). Compensation measures can "aim to redress insufficiencies in spatial planning, to re-create lost heritage values and/or repair damages on listed buildings with architectural qualities" (Rönn and Grahn Danielson, 2020: 7).

The authors further characterise compensation as an "essentially contested concept" based on the absence of consistent interpretations of its meaning and application in the Swedish planning system (Rönn and Grahn Danielson, 2020: 10). This is seen in that it is an "open concept" that acquires meaning through "critical dialogue among stakeholders" (Rönn and Grahn Danielson, 2020: 11). It also raises uncertainty because of questions that accompany it that ask how historic environment values can be conserved in positive ways (Rönn and Grahn Danielson, 2020: 13). Further, it promotes debate among decision-makers on the possibility of restoring values in planning (Rönn and Grahn Danielson, 2020: 13). It is also ethically fraught because it casts judgement on the historic environment, and either meets with approval or is criticised (Rönn and Grahn Danielson, 2020: 14-16). Further, there are power struggles involved in balancing various interests, and negotiations among key actors (Rönn and Grahn Danielson, 2020: 18). As these understandings show, compensation involves significant negotiation and is far from straightforward.

Compensation is not only considered contested within Swedish planning but also challenged in other quarters. For one, historic environment loss is considered impossible to compensate for, when compensation is understood as relocation or replacement of the environments. This is seen in Unesco et al.'s (2022) diagram in a joint document by Unesco, Iccrom, Icomos, and IUCN. The mitigation hierarchy, in their handbook on impact assessments for impacts to World Heritage, is seen in Figure 2.

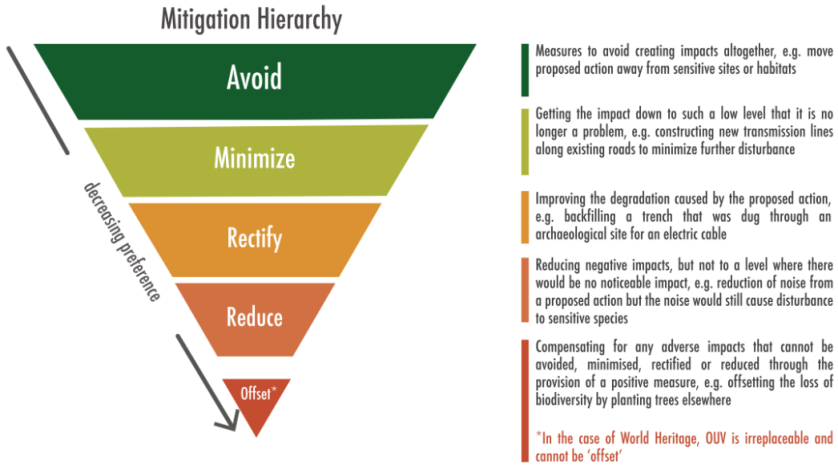

Figure 2: Mitigation hierarchy

Source: Unesco et al. (2022: 45)

Offsetting is understood as replacing the affected historic environment that lies in the crosshairs of the planning project, and is unacceptable (Unesco et al., 2022: 45). Avoidance and minimisation are the only two acceptable options for World Heritage (Unesco et al., 2022: 60). This approach considers value as innate in physical historic environments. The lost value of these sites is considered impossible to compensate for, and the environments, irreplaceable (Fredholm et al., 2019: 67). From another perspective, compensation can also be seen as an unreasonable fixation on physical historic environments, and, while not spelt out, based in "loss aversion" (Holtorf, 2015). Holtorf (2015: 412) considers the possibility of compensating for the loss of one object with another, while maintaining the former's value. In this thinking, the object itself is secondary to the value it offers.

Compensation for historic environment loss is variously undefined, misunderstood, and unwelcome. Above all, it is under-researched. Yet, it circles the realm of negotiation of values and productive ways of dealing with historic environments in response to planning projects. It therefore presents as a fruitful area for exploration of conservation as the dynamic management of change. From this perspective, compensation is viewed through the lens of gain in moments of historic environment loss.

Exploring compensation further addresses some of the gaps in scholarship in conservation and planning policy and practice as highlighted by other academics.

Planning policy lacks direction on how to mediate conflicting values as laid out in clashing policies, with decisions that are often left to the discretion of individual decision-makers (Pendlebury et al., 2014: 46). Though both goals are identified as being of the "utmost importance", they rarely enter into dialogue and may end up being resolved arbitrarily (Pendlebury et al., 2014: 46). As Pendlebury et al. (2014: 53) write, the planning system is where values are negotiated and where conflict can engender creative solutions.

In practice, compensation deals with the 'how' question of dealing with values, and bridging conservation and urban planning. This is in keeping with the gaps identified by authors. As Pendlebury (2008: 13) writes, while values have in recent decades undergone a shift in understanding in theory, from innate in material to socially constructed, the absorption of this thinking in practice has been limited. For Holtorf (2015: 418), the challenge lies in identifying new objects that can be bearers of the desirable values. He argues for the need in heritage studies to discuss the modalities of valuation of constantly changing historic objects (Holtorf, 2015: 418). Further, even though integration of historic environment conservation and urban planning projects is advocated in policy, it has not broken adequate ground in practice (Veldpaus et al., 2013: 13). Veldpaus et al. (2013: 13) urge the assessment and development of tools to bring the two together.

The background to studying compensation is its resemblance to conservation of values, a firm position in planning, and overall inadequate theory and tools to operationalise it. Using these as starting points, the thesis embarks on exploring compensation for historic environment loss in response to urban planning projects.

Chapter 3: Methodology

Compensation for historic environment loss in planning is addressed through three research questions. The questions examine compensation in law and policy, theory, and practice. The bulk of the research is centred around the third question, with the first two serving as preliminary inquiries to build up to the third. Each question contributes to a deeper understanding of compensation, progressively enhancing the overall comprehension of the topic.

This chapter on methodology describes how the questions are addressed. The chapter is divided into two sections. The first section outlines my object of study and epistemological positioning. The second section details the methods and material used to address each question, as well as provides a final note on language and translations. The second section forms the bulk of the chapter.

Object of study and positioning

The object of study of this thesis is compensation for loss of officially designated historic environments due to urban planning. I primarily focus on the Swedish perspective of compensation due to its relevance in Swedish planning across law, policy, theory, and practice.

Since I research perspectives of actors in the planning process, I employ a social constructionist epistemology and conduct qualitative research. This is fitting because social constructionism contends that there is no universal truth, only interpretations of reality by individuals (Galbin, 2014: 82). It is based on the premise that scientific knowledge is socially constructed. Qualitative research is suitable for the enquiry into the actors' perspectives because it is a means to discover attitudes and practices, among other social phenomena (Kelle, 2014: 556). Further, it is a means to interpret these phenomena and is generally done in a "natural setting" (Denzin and Lincoln, 2018). These starting points form the orientation for addressing the research questions.

Methods and material

For the first two questions, I rely mostly on textual sources such as academic papers and law and policy documents. For the third, I employ a case study approach, using two cases, the West Link in Gothenburg, Sweden, and the Mumbai Metro in Mumbai, India. This section is divided into three sub-sections to elaborate on the methods and material used to address each of the research questions.

Question 1: How is compensation understood in law and policy?

This research question is addressed in Chapter 5. I study compensation according to its legal and policy definitions using textual sources in the form of the relevant Swedish laws, policy documents by authorities such as the National Board of Housing, Building and Planning and the City of Gothenburg, and reports by the Swedish Transport Administration (STA).

I interpret the laws and guidelines mainly through the work of Persson (2011). His book, *Att förstå miljökompensation (Understanding environmental compensation)* is a comprehensive monograph on environmental compensation in Swedish law and policy. His work is frequently cited in the context of environmental compensation in general and has also been cited by a Swedish Government (2017) investigation on ecological compensation.

Question 2: How can compensation be understood in theory?

This research question is addressed in Chapter 6. I study compensation according to its interpretation in theory, using textual sources in the form of academic papers and other publications by Magnus Rönn, Benjamin Grahn Danielson, and Stig Swedberg, affiliated to the organisation, Rio Kulturkooperativ. Their work springs from research conducted within the scope of a grant from the Swedish National Heritage Board in 2013 for the research project *Styrmedel och kompensationsåtgärder inom kulturmiljöområdet (Means of Control and Compensation Measures within Cultural Heritage Management)*. They study compensation through planning agreements in various cases. Their research is based on planning practices that they characterise as compensation. Their work forms a large proportion of the little research on

historic environment compensation in Sweden, and has spawned further research on the topic since

I analyse their characterisations of compensation intuitively, using the views of scholars advanced in the literature review. These scholars contend that conservation is a people-centred, rather than a material-centred activity, and values are ascribed, rather than innate in material.

Question 3: How can compensation be understood in practice?

This research question is the most central of the three and is addressed in Chapters 7-10. Here, I interpret compensation based on empirical findings of how public actors interpret compensation in practice. Accordingly, I employ a case study approach to address the question.

The rest of this section describes the methods and material used in four parts. The first part outlines the use of the case study approach, the second part outlines the case selection and its validity, the third part describes the methods used to gather material in the cases, and the fourth part explains the analytical method.

Case study approach

I interpret compensation using two case studies. The primary case is the West Link in Gothenburg, Sweden, which offers the main lens through which to explore compensation. The secondary case is the Mumbai Metro in Mumbai, India, which helps bring compensation in the West Link into sharper focus. In line with social constructionism, the cases act as interpretive cases. I use them to attempt to capture multiple perspectives on a single issue, i.e., conservation of historic environments in the face of physical loss due to urban planning projects. These perspectives are based on the views of public actors in planning practice.

The case study approach is suitable for addressing the research question. It springs from the social constructionist epistemology, and embodies a relativist perspective that is in line with capturing different perspectives (Yin, 2018: 16). It is further pertinent for dealing with 'how' questions (Yin, 2018: 2). Case studies are also particularly suited for practice-oriented research fields like architecture and planning (Johansson, 2007: 49; Rönn, 2020: 117). They are rich in information and have utility in practice (Rönn, 2020: 117). More generally, case studies help access context-dependent knowledge and are a window into the complexity of reality

(Flyvberg, 2006: 223). Such knowledge is a cornerstone of social sciences research (Flyvberg, 2006: 223).

Case study selection

The cases were selected based on certain clear criteria, which arise from the object of study. Since the thesis explores *compensation* for the loss of *officially designated historic environments* due to *urban planning*, the three ingredients of the chosen case needed to be compensation, historic environments, and urban planning projects. The West Link fulfils the criteria set out. It is a massive infrastructure project (*urban planning* criterion), that tunnels through parts of the city's officially designated "kulturmiljöer" or "cultural environments" (*officially designated historic environments* criterion), and whose planning is governed by legal instruments that call for actions that they refer to as compensation or strengthening (*compensation* criterion). Given this background, I selected the case based on certain expectations of the knowledge it would offer. This is what Flyvberg (2006: 230) calls "information-oriented selection". Further, there are no precedents for compensation at this scale in Sweden. This also makes the West Link a "critical case" (Yin, 2018). Such cases can make a significant contribution to developing or extending theory (Yin, 2018: 49).

The selection of the West Link was within the wider context of the Heriland research school. It was when the doctoral project itself was formulated, and before my employment. The original call-out for the doctoral position titled the project *Heritage development in large scale infrastructural project – a collaborative and trans-disciplinary approach*, mentioning the West Link as one of the empirical components. The project came under the overarching theme of "changing environments". Its description was limited to mentioning a focus on "the integration of heritage aspects in large infrastructural urban projects" (Gothenburg University, 2019) and it acknowledged the challenges of dealing with historic environments in the context of urbanisation (Heriland, 2020a). Apart from these very broad outlines, there were no further requirements of the research, making the project largely flexible from the start. So, while the West Link was determined as research material from before my employment, its specific criteria (compensation, officially designated historic environments, and urban planning projects) were not. I developed these in the course of the research, building on existing work done at the department, such as the report, *Professionella aktörer och gränsöverskridande kulturmiljöarbete. Fallstudie: Västlänken (Professional actors and cross-sectoral negotiations on built heritage. Case study: The West Link)* by Fredholm et al. (2019). The choice of the

West Link was also a way of deepening the exploration of compensation, which had not been done in previous collaborations between the university and public partners.

The Mumbai Metro was chosen based on its similarity to the West Link. It is contemporaneous with the West Link, and further, fulfils two of the three criteria for case selection previously laid out. It too is a massive infrastructure project (*urban planning* criterion) that tunnels under parts of the city's listed "heritage buildings and precincts" (*officially designated historic environment* criterion). The *compensation* criterion is lacking, as there are no legal requirements to compensate – in those or other words – for historic environment loss.

The conservation responses in the Mumbai Metro help develop an understanding of the gamut of ways to deal with the historic environment loss in planning in general. The Mumbai Metro provides a reference point for the compensation response in the West Link, making it possible to understand it in relation to other responses. So, despite the absence of formal compensation, the Mumbai Metro brings compensation in the West Link into sharper relief, making it possible to scrutinise its role in planning. The Mumbai Metro further helps illuminate how conservation is embedded in planning in a non-western, post-colonial context, and offers a window into the views of public actors. Additionally, the findings, as well as the case context, are crucial for the discussion on compensation and its boundaries in the final chapter.

Case study material

The research is limited to the material gathered during the fieldwork period of the PhD. The West Link and Mumbai Metro are both ongoing projects, whose timelines stretch before and after the research period. The scheduled construction timeline of the West Link is 2014-2030, and of the Mumbai Metro, 2013-2023 (partial). The duration of the PhD has been October 2019 to November 2023, with the bulk of the fieldwork done in 2020-2022. So, the fieldwork period forms a small window within the projects' overall timelines. Consequently, many of the findings are based on the status of proposed actions at the time of fieldwork.

I gathered primary source material in both cases, mainly through interviews. Interviews are commonly used in social sciences research, in research of cities in particular (Cochrane, 2014: 38), as well as in the field of conservation or "kulturvård" and critical heritage studies (Nyström, 2021: 26). Interviewing, as a method, is in keeping with the qualitative social constructivist epistemology.

Nevertheless, the purpose of the interviews was to gather content, while acknowledging that this is mediated in the interview process.

The interviews in the cases were semi-structured. A set of questions formed the scaffolding for each interview. This also provided flexibility for interviewees to elaborate on issues as the interview progressed or for me to develop new questions in the interview process. Semi-structured interviews are frequently used in urban research (Cochrane, 2014: 44). They are also a good form of interviewing "elite professionals" or those in positions of authority, for the structure they provide the conversation (Cochrane, 2014: 44).

I conducted interviews with public actors and professionals involved in the conservation-related decisions. These took place between November 2020 and November 2023, and all of them were in English. They were either in-person, online, or on the phone and lasted between 30 minutes and 2 hours 10 minutes. However, some clarificatory follow-up 'interviews' were as short as 5 minutes. The constraints on in-person interviews in both cases largely resulted from pandemic-related restrictions and at times conducting the interviews at a distance. They were recorded after seeking consent, except for two interviewees, in keeping with their wishes. In all cases, notes were taken simultaneously.

The interviews were transcribed for content. I did preliminary transcription using a software, followed by refinements and standardisation. In some cases, I transcribed only relevant content. All the interviewees have been anonymised, with only their professional affiliations mentioned.

I supplemented interviewing and document analysis with workshops and meetings I attended, and conversations with journalists and media reports. The rest of this section details the actors, starting points, and the methods deployed in each case study.

Case study: West Link

The relevant actors in the case are the Swedish Transport Administration (STA), City of Gothenburg, County Administrative Board of Västra Götaland, and National Heritage Board. All of them are public authorities at either national, regional, or local levels. Within the City of Gothenburg, the relevant group working on historic environment conservation in the West Link is the "sakområde: kulturmiljö" or the group in charge of the historic environment subject area. I refer to this group in the thesis as the "City's historic environment group" and in in-text citations attributed to interviewees, abbreviated to "CHEG". The City's historic

environment group consists of members from the City's "Kulturförvaltning" (Culture Administration), "Stadbyggnadskontor" (Town Planning Office) and "Fastighetskontor" (Real Estate Office). The culture administration includes the City Museum, which has produced action plans relevant to the West Link. Where the action plans are cited, they mention affiliation to the City Museum. The other relevant actors in the case are consultant architects on the project.

I focused on the two main actors in compensation-related negotiations, i.e., the STA and the City's historic environment group. The STA has the mandate to fulfil the legal requirement of compensation and their proposed actions emerge through discussions with primarily the City's historic environment group. To a lesser degree I focused on material gathered from some of the architects contracted by the STA or their construction consultants.

The starting point for gathering material in the West Link case was planned secondments at the STA and Gothenburg City Museum. These stints were baked into the project description (Heriland, 2020b). The secondments were scheduled for October-December 2020 and December 2020-May 2021. The idea was to establish close interaction with people working on the project at the two organisations and gain access to interviewees, documents, and project resources. The original purpose was also to contribute to the organisations' work with the historic environment in some way. Due to the Covid-19 pandemic, the secondments went largely online and only took the form of interviews, access to project material, and attendance at workshops and meetings between the actors. This impacted the thesis by way of fewer spontaneous interactions with project partners and made understanding the intricacies of the project more challenging. The overall impact was however fairly limited.

A further starting point for studying the West Link was the previously mentioned report on negotiation in the West Link by Fredholm et al. (2019). The report followed the actors between 2014 and 2019 tracing their communication with respect to historic environment issues. It provided orientation for where to begin exploring the object of study. Using the report as a starting point, I later co-authored an academic paper titled *Strategic Responses to Wicked Problems of Heritage Management: Experiences from the West Link Infrastructure Project in Gothenburg, Sweden* (Fredholm et al., 2021). I also used some of the findings from the West Link case in a presentation and paper titled *Heritage compensation in changing environments: The case of the West Link infrastructure project, Gothenburg*. This was presented in the session, "Compensation in Architecture in Archaeology" at the annual meeting of European Association of Archaeologists (EAA) in Kiel, held virtually in

September 2021. The paper was published in Kouzelis et al.'s (2022) edited volume by the same name.

Below is a description of the material gathered through interviews, official documents, and workshops and meetings.

Interviews

I mainly conducted interviews with representatives of the Swedish Transport Administration (STA), the City's historic environment group, and consultant architects. I made initial contact with key actors in the STA and City Museum through my supervisor since the organisations had already been established as secondment partners. In the initial stage, interviews largely centred on the actors' proposals for compensation, whilst also circling other topics such as their mandates, professional roles, and constraints. These key interviews snowballed into interviews with other relevant actors in the STA and City's historic environment group, as well as with the architects consulting on the project.

Some interviews were conducted with actors outside the immediate scope of the project as well. The interview with Interviewee 13a, an academic, helped orient me with regard to compensation in Swedish law and policy. The interview with Interviewee 14a, an employee of the County Administrative Board of a different region, helped with understanding compensation and its challenges at the regional scale. While these interviewees have not been cited, they helped in either clarifying doubts or understanding the West Link and compensation in their wider contexts.

I interviewed a total of 14 people, some of them multiple times. One interview was conducted jointly. Table 1 shows the details of the interviews conducted. I have listed everyone who was interviewed, even if they have not been cited in the text.

Table 1: Interviews, West Link case

Name	Affiliation/Role	Date	Mode
Interviewee 1a	Swedish Transport Administration (STA)	November 2020-November 2023	Audio call, in-person
Interviewee 2a	Swedish Transport Administration (STA)	December 2020	Audio call
Interviewee 3a	Swedish Transport Administration (STA)	September 2022	In-person
Interviewee 4a	Architect consulting on the project	November 2022	In-person
Interviewee 5a	Architect consulting on the project	October 2021	Video call
Interviewee 6a	Architect consulting on the project	October 2022	In-person
Interviewee 7a	City's historic environment group	November 2020-September 2021	Video call, in-person
Interviewee 8a	City's historic environment group	September 2021	Video call
Interviewee 9a	City's historic environment group	April 2021	Audio call
Interviewee 10a and Interviewee 11a (joint)	City's historic environment group	September 2022	In-person
Interviewee 12a	City's historic environment group	October 2022	Video call
Interviewee 13a	Academic	November 2020	Video call
Interviewee 14a	County Administrative Board of Uppsala County	December 2022	Video call

Interviews with public actors, architects, and others in the West Link case

Official documents

Action plans, vision documents, and initial proposals form the bulk of official documents that I referred to. These were produced by both the STA and City Museum, as well as consultant architects. I obtained these documents either from the websites of the respective authorities or from the interviewees. Some of the initial proposals I referred to were later built on by the actors and included as part of their action plans. I have nevertheless included them in the list of documents referred to. Table 2 summarises the main documents referred to.

Table 2: Official documents, West Link case

Author	Year	Type of document	Number of documents
Swedish Transport Administration (STA)	2016-2023	Action plan	6
Swedish Transport Administration (STA)	2015	Vision document	1
City Museum	2017-2018	Vision document	2
City Museum	2014	Initial proposal	1
Architects	2020-2022	Initial proposal	5

Official documents produced by public actors and architects in the West Link case

Workshops and meetings

The Swedish Transport Administration (STA), City's historic environment group, and other actors participated in workshops and meetings to discuss the issues around compensation and the historic environment. Some of these were between the STA and consulting architects, some between the STA and the City of Gothenburg, and others between the STA, City, and additionally the County Administrative Board of Västra Götaland, and the National Heritage Board. The workshops and meetings took place both online and in-person. I attended some of these, took notes, and recorded some of them. Nearly all were in Swedish. I used these interactions to familiarise myself with the actors, get a sense of the process and issues involved, determine whom to interview and which documents to refer to, and to formulate sharper questions for one-on-one interviews. Table 3 summarises the workshops and meetings attended.

Table 3: Workshops and meetings, West Link case

Type of meeting	Date
Meeting between STA and City (various departments)	September 2020
Meeting between STA and architects	September 2020
Meeting between STA and architects	September 2020
Meeting between STA and City (various departments)	September 2020
Meeting between STA, City (various departments), County Administrative Board, and National Heritage Board	October 2020
Meeting between STA and architects	October 2020
Meeting between STA and City (various departments)	November 2020
Meeting between STA, City (various departments), County Administrative Board, National Heritage Board, architects, and commissioned archaeologists, to discuss Skansen Lejonet/Gullberg	December 2020
Meeting between STA and City (various departments)	December 2020
Meeting between STA, City (various departments), and commissioned archaeologists, to discuss Haga/Rosenlund	May 2021
Meeting between STA, City (various departments), County Administrative Board, National Heritage Board, architects, and commissioned archaeologists, to discuss Skansen Lejonet/Gullberg	May 2021
Workshop between STA, City (various departments), architects, and commissioned archaeologists, to discuss Johanneberg landeri	October 2022
Workshop between STA, City (various departments), architects, and commissioned archaeologists, to discuss Johanneberg landeri	November 2022

Workshops and meetings between public actors in the West Link case

Case study: Mumbai Metro

I have called the case in focus the Mumbai Metro; though this is not its official name. It is Line III of the 14 lines under construction in the city. However, since this metro line is in focus, I refer to it as the Mumbai Metro for convenience.

The relevant actors in the Mumbai Metro case are the Mumbai Heritage Conservation Committee (MHCC), the developers of the metro, represented by the Mumbai Metro Rail Corporation Limited (MMRCL) and the Mumbai

Metropolitan Region Development Authority (MMRDA), and architects consulting on the project.

The MHCC is notified by the Urban Development Department of the state of Maharashtra and administered by the Municipal Corporation of Greater Mumbai (MCGM). The committee is usually chaired by a retired bureaucrat and consists of members, both appointed (by the Urban Development Department) and nominated. Members have other professional roles as well – as private architects, structural engineers, academics, historians, representatives of the MCGM, and so on. For the sake of readability, the Mumbai Heritage Conservation Committee (MHCC) is referred to as the "Heritage Committee" and the Municipal Corporation of Greater Mumbai (MCGM) is referred to as the "Municipality".

The developers of the metro are represented in the research by both the Mumbai Metro Rail Corporation Limited (MMRCL) and the Mumbai Metropolitan Region Development Authority (MMRDA). MMRCL is responsible for building the metro, and MMRDA is the regional planning body under the Government of Maharashtra. In this research, the MMRCL and MMRDA collectively represent the developers of the metro. For the sake of readability, the Mumbai Metro Rail Corporation Limited (MMRCL) is referred to as the "Metro Rail Company", and the Mumbai Metropolitan Region Development Authority (MMRDA) is referred to as the "Regional Development Authority". In-text citations for all the documents however refer to the authorities by their original acronyms.

Key individual actors were identified through news reports of the metro, online searches, and conversations with journalists who had been covering the project, as well as covering historic environment issues in general. I made initial contact with the interviewees to request interviews primarily through Whatsapp and otherwise via email.

Below is a description of the material gathered through interviews, official documents, and conversations with journalists and media reports.

Interviews

Former and current Heritage Committee members were the primary source of interview material. This was partially due to relatively easier access to them. Some of the members have been part of the discussions about the metro, which have come up at various points since 2013. Some were on the committee before that. All the interviewees helped understand the workings of the committee in general, both currently and historically, as well as historic environment issues in general.

The second set of key interviews were with current and former representatives of the Metro Rail Company and Regional Development Authority. These interviews were supplemented with interviews with an architect consulting on the project, academics, and other individuals not directly connected to the official historic environment but relevant for understanding the other issues surrounding the metro or conservation practice in Mumbai. One interview was with a member of the Tree Authority, which is part of the Municipality's Garden Department, and deals with conservation and plantation of individual trees in the city. Some of the interviews snowballed into interviews with other actors. Where the interviews were helpful in providing a more general understanding of issues, the interviewees have not been cited in the text.

It was not always straightforward to access some of the interviewees and set up interview appointments, variously due to frequent rescheduling and unavailability. Some of the identified actors opted out of being interviewed and some did not respond, despite repeated requests. Some interviewees representing the metro developers were less forthcoming or did not have time. Two interviewees (Interviewees 3b and 8b) did not want the interviews recorded, so they have not been cited. Due to these constraints, the research does not cover the entire breadth of relevant actors in the case, and potential material from these sources has been gathered using other methods instead.

In total, 26 interviews inform this study. Two dedicated rounds of interviews were conducted, one in January-May 2021 and the second, in January-March 2022, however fresh interviews and follow-ups continued until November 2023.

Table 4 shows the details of the interviews in the Mumbai Metro case. Everyone who was interviewed has been listed, even if they have not been cited in the text.

Table 4: Interviews, Mumbai Metro case

Name	Affiliation/Role	Date	Mode
Interviewee 1b	Heritage Committee	February 2021	In-person
Interviewee 2b	Heritage Committee	January 2022-October 2023	Audio call
Interviewee 3b	Heritage Committee	March 2021	In-person (not recorded)
Interviewee 4b	Heritage Committee	February 2021	In-person
Interviewee 5b	Heritage Committee	March 2021	Audio call
Interviewee 6b	Heritage Committee	May 2021	Audio call
Interviewee 7b	Heritage Committee	January 2022	Audio call
Interviewee 8b	Heritage Committee	February 2021	Audio call (not recorded)
Interviewee 9b	Metro Rail Company	March 2022	Audio call
Interviewee 10b	Metro Rail Company	January 2022-October 2023	Audio call
Interviewee 11b	Metro Rail Company	January 2022	Audio call
Interviewee 12b	Regional Development Authority	January 2022	Audio call
Interviewee 13b	Heritage Committee	February 2021	Audio call
Interviewee 14b	Heritage Committee	January 2022	Audio call
Interviewee 15b	Municipality	January 2022	Audio call
Interviewee 16b	Regional Development Authority	January 2022	Audio call
Interviewee 17b	Heritage Committee	March 2021-October 2023	In-person, audio call
Interviewee 18b	Tree Authority of the Municipality	March 2022	Audio call
Interviewee 19b	Conservation architect	January 2022	Audio call
Interviewee 20b	Conservation architect	January 2022	Video call
Interviewee 21b	Academic	March 2021	Audio call
Interviewee 22b	Academic	May 2021	Audio call
Interviewee 23b	Conservation architect, academic	May 2021	Audio call
Interviewee 24b	Bombay Catholic Sabha (Council)	February 2022	Audio call
Interviewee 25b	Advocate for petitioners in the Parsi fire temples case	July 2023	Audio call
Interviewee 26b	Architect consulting on the project	July 2023	Audio call

Interviews with public actors, professionals, academics, and others in the Mumbai Metro case

Official documents

The minutes of the Heritage Committee meetings form a major source of material about the historic environment discussions in the case. They are available in the public domain on the Municipality's website. Other official documents are those produced by the Metro Rail Company, and were available on their website. Table 5 summarises the main official documents referred to.

Table 5: Official documents, Mumbai Metro case

Author	Year	Type of document	Number of documents
Heritage Committee	2013-2019	Meeting minutes	9
Metro Rail Company	2011	Report	1
Metro Rail Company	2020	Assessment	1

Official documents produced by public actors in the Mumbai Metro case

There are other documents that might have been useful, such as the Standard Operating Procedure for dealing with excavated archaeological objects during construction, the Building Condition Survey, and some internal communications between the authorities. I tried to get a hold of these but was not granted access by the Metro Rail Company. As with the interview material, in the case of official documents as well, the case largely relies on material from the documents of the Heritage Committee. However, the views of representatives of the Metro Rail Company/Regional Development Authority are apparent to the extent of their attendance at the Heritage Committee meetings, and reflect in the meeting minutes.

Conversations with journalists and media reports

Conversations with journalists covering the project helped with access to interviewees and project documents, clarification of specific factual questions, and orientation with respect to the legal lay of the land in the national, regional, and local contexts in which the project is embedded. They also helped orient me with respect to the issues surrounding the project. These conversations took place between January 2021 and November 2023, whenever the need arose. Most of the conservations were on the phone, others via text or email. Some of the phone conversations were recorded and notes were taken.

Media reports were similarly crucial for understanding the background and progress of the project, along with its various controversies. The extent of documentation and ease of access to official material was limited, so media

coverage helped plug these holes. I have largely used media reports in the analysis in Chapter 9, with respect to the discussion on the effects of the metro outside of the officially designated historic environments.

Analytical method

The source material gathered from both the cases to address the research question is analysed by means of qualitative content analysis. This analytical method is based on the epistemological positioning of the research, in qualitative social constructionism. Content analysis is a form of qualitative data analysis, which involves the interpretation of linguistic material to draw meaning from it (Flick, 2014: 5). It involves deconstructing the data and making sense of it, as a means to derive meaning from it (Ballinger, 2008: 121). Content analysis is widely used for textual data including interview transcripts (Ballinger, 2008: 121). It recognises the subjectivity of the text to multiple interpretations and its dependence on the context and discourse it is part of (Ballinger, 2008: 121).

The analysis increasingly shifts from an empirical focus to a theoretical focus as the thesis moves from Chapter 7 to Chapter 10. The cases are first discussed jointly in Chapter 7. In this chapter, I sort the physical conservation proposals, called "actions", into more conceptual categories, called "responses". I thus develop an analytical tool of responses that covers the actions in both the cases. This level of analysis in Chapter 7 considers only the actions as put forth by the actors in the cases, and not their (subjective) viewpoints.

The next level of analysis is of the responses in the cases more broadly. This is done independently for each case, in Chapter 8 for the Mumbai Metro, and Chapter 9 for the West Link. The analysis draws inferences on the nature of the conservation responses in the two cases. The analyses in Chapters 8 and 9 stay close to the cases and their immediate contexts and draw on the source material itself. They also include the opinions of the actors, with some references to legal frameworks and context-specific literature.

The analysis of the cases is done jointly again in Chapter 10. This is the most generalised level of analysis. It draws on wider theory, raised in the literature review, as well as findings from the first two research questions. Based on the theoretical positioning and literature review, two analytical frameworks are used: conservation and planning discourses, and authorised views on heritage. The first framework uses the lens of Ashworth's (2011) three paradigms – preservation, conservation, and heritage – that have been renamed "discourses" (see Fredholm et al., 2019: 17). The second analytical framework uses the lenses of the role of

experts and the selection of values to bring out the extent to which authorised views on historic environments are reflected in the two cases.

Overall, the analytical approach of content analysis through the frameworks set out is in line with the reasoning habit of "abduction", as defined by Reichertz (2014). Abduction involves the decontextualising of data followed by its recontextualisation (Reichertz, 2014), in order to arrive at new ideas. Abductive reasoning is applied by removing the actors' ideas from their contexts and recontextualising them within theoretical discourses. Giving a new perspective to the data and rearranging it thus, is a way of restoring a sense of security to the surprise and uncertainty about phenomena, which are what drive research (Reichertz, 2014). For Reichertz (2014: 126), "[a]bduction begins when the human actor is taken by surprise, and it ends when the surprise is replaced by understanding and the ability to make predictions". Abduction involves matching observations to theory (Peirce, CP, 7.218-, 1903, in Reichertz, 2014: 126).

Note on language and translations

As part of the research, I refer to a significant volume of texts in Swedish, which is not my native language. This, however, has not affected the findings, due to a combination of adequate grasp of the language, translation support, and frequent clarifications where required.

Chapter 4: Case overviews

The West Link and Mumbai Metro are both cases of massive infrastructure projects. They make significant alterations to the historic environment and encounter several challenges in the process. This chapter provides a background to the cases, with a specific focus on the issues related to the historic environment.

West Link

The West Link train tunnel is an ongoing railway extension project including three new stations, in Gothenburg, Sweden. Construction began in 2016 and is scheduled to be completed by 2030. The Swedish Transport Administration (STA) is responsible for its planning and implementation. It is 8km long, of which 6.6km pass through central Gothenburg. The route of the West Link and its three new stations – Central, Haga, and Korsvägen – is shown in Figure 3.

Figure 3: Route of the West Link with three new stations

Source: STA (2021b)

The West Link is part of Sweden's West Sweden packet, a financial instrument directed towards a bouquet of road and rail infrastructure projects intended for the region's development (STA, 2022b). Investments in rail works are considered necessary to meet the city's growing demands in a sustainable fashion (STA, 2021b). Gothenburg is the most urbanised hub of the Västra Götaland region, Sweden's second largest city by population, and one of Northern Europe's fastest growing regions (STA, 2021b). The West Link aims to improve connectivity, reduce transit times, and increase rail traffic capacity in the region which is growing in population and in economic terms (STA, 2021b).

The following section introduces the historic environment issues in the context of the West Link.

Historic environment

The West Link snakes through parts of the old city. Both the West Link and the historic environment through which it travels are "riksintresse" or "national interests". As national interests, both have "nationally important values and qualities" (NBHBP, 2022, author's translation) as designated under the Environmental Code (1998). The national interest listing of the West Link is based on its importance for transportation. For the historic environment, the basis is "kulturmiljövärden" or "cultural environment values". Formally labelled O 2: 1-5, these national interest areas include the city's 17th century fortifications, "landeris" and historical parks. Landeris[2] are parcels of former agricultural land that the Crown leased out to the city after Gothenburg was laid out in 1621. They were responsible for the city's food supply and are today part of the city limits. The area is designated as a national interest based on the following motivation:

> "Metropolitan environment, shaped by the function as "Sweden's gate to the west" and the strategic location for shipping, trade, and defence at the mouth of the Göta River water system. The kingdom's foremost shipping city and city of residence, cathedral, and university city, characterised by three centuries of trade aristocracy. One of the foremost examples of 17th century urban planning and fortification art, and of urban planning during the 19th and 20th centuries. The Gothenburg building tradition with its neighbourhoods having various characters. (*National interests for cultural environment values in Västra Götaland County 2022*, author's translation)

[2] Since landeris are a specific typology of historical agricultural area and a recurring term, the thesis employs the Swedish word without quotations.

Apart from the national interest areas, the West Link also touches other officially valuable areas and buildings. These include underground and overground ancient remains, various types of listed and ecclesiastical buildings, and other buildings that are part of the City of Gothenburg's preservation programme (2016a: 15-17). Some of these environments are also what the STA calls "especially valuable environments" (STA, 2016a: 18, author's translation).

Since the affected area has a high official value, the Swedish national government instituted conditions for permissibility of the West Link construction. Condition 1, which is relevant for the historic environment, mandates that the West Link minimise physical loss of the historic environment and incorporate it into the new project. Condition 1 reads:

> "The location and design of the West Link within the corridor shall, after consultation with the National Heritage Board, the County Administrative Board of Västra Götaland County, and the City of Gothenburg, be planned and executed so that negative consequences for the cultural environment and the urban environment in general, including parks and green areas, are limited. Affected ancient remains must, as far as possible, be preserved, made visible and incorporated into the new facility." (*Admissibility condition for the West Link by government decision 2014*, author's translation)

The STA was mandated to engage with various other municipal, regional, and national authorities during planning. The main consultative parties, as specified by Condition 1, are the STA, City of Gothenburg, County Administrative Board, and National Heritage Board. Condition 1 forms the basis of negotiations around the historic environment between the parties.

In addition to Condition 1, the Land and Environment Court issued another condition to the STA, called "P3: Frågan om påverkan på kulturmiljön" or "The issue of the impact on the "cultural environment". P3 specifies the need for concrete proposals for compensation in specific locations:

> "The Swedish Transport Administration shall investigate whether national interests in cultural environmental care or other cultural environmental values have been affected by the licensed activities and how this impact should be compensated. The inquiry shall include concrete proposals for measures aimed at strengthening cultural environmental values. The investigation must also report on the distribution of responsibility between the parties concerned. The proposals must be drawn up in consultation with the County Administrative Board, the National Heritage Board, and the City of Gothenburg. The investigation will primarily focus on measures for the cultural environments Gullberg/Skansen Lejonet, the fortified city of

> Gothenburg, Kungsparken Nya Allén, and Johanneberg landeri." (*Judgement of the Land and environment court 2018*, author's translation)

P3 defined the areas of the national interest expected to be most affected. These areas mentioned are mapped out in Figure 4.

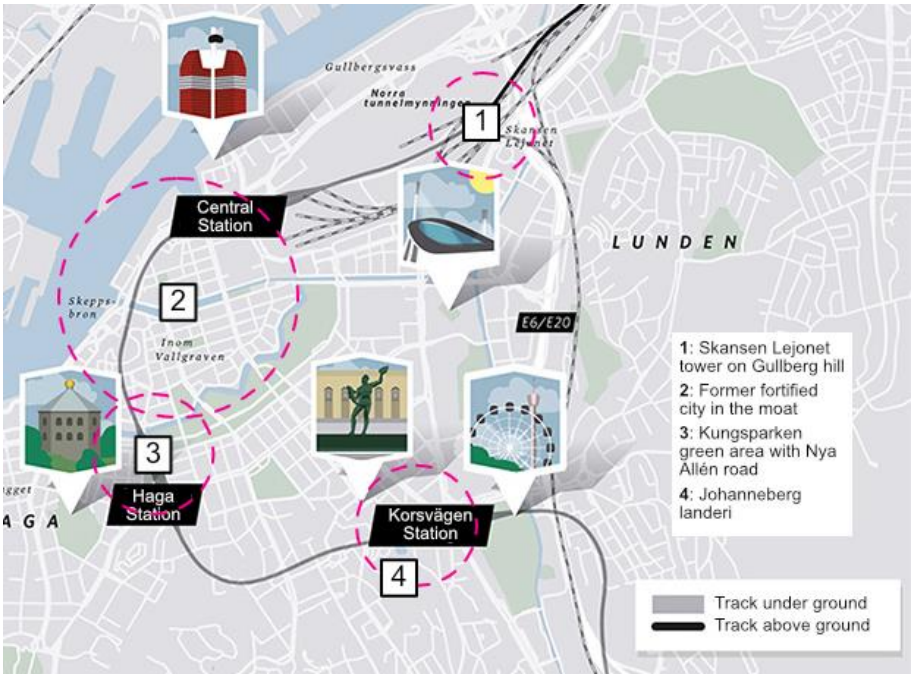

Figure 4: Affected parts of the national interest mentioned in the P3 ruling

Base image source: STA (2021b)

The individual areas that the P3 ruling called out are shown in Figures 5-8.

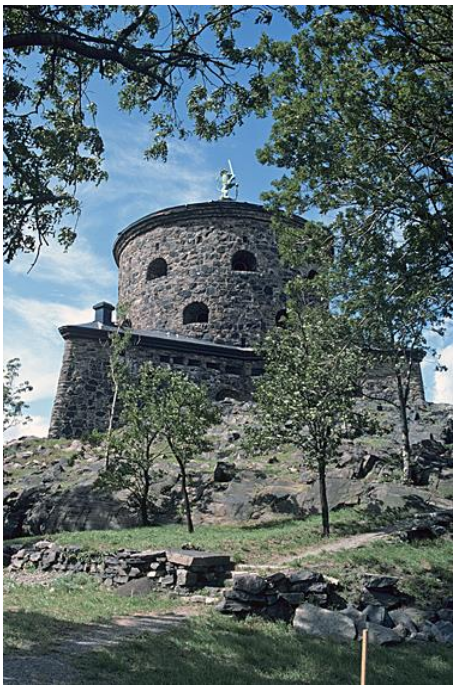

Figure 5: Skansen Lejonet tower on Gullberg hill

Photograph: Pål-Nils Nilsson/National Heritage Board, CC BY 2.5, via Wikimedia Commons

Figure 6: City centre of the former fortified city

Photograph: Bengt A. Lundberg/National Heritage Board, CC BY 2.5, via Wikimedia Commons

Figure 7: Kungsparken green area with Nya Allén road

Photograph: Alankrita Srivastava (2021)

Figure 8: Johanneberg landeri

Photograph: Hesekiel, CC BY 4.0, via Wikimedia Commons

The STA and City of Gothenburg entered into a further agreement with respect to the historic environment. The Implementation Agreement tasked the STA with not only minimising physical loss to the national interest but further, strengthening it. The Agreement introduced the need for the "stories" of the old city to be conveyed. It stipulated:

> "- essential characteristics of the various parts of the national interest should be perceived as stronger after the implementation of the railway project.
>
> - stories about parts of the national interest for the cultural environment should become clearer in the city and the cityscape after the implementation of the railway project." (*Implementation agreement for the West Link between STA and City of Gothenburg 2016*, author's translation)

The STA's work with compensation lies against this background of legislative instruments for dealing with the historic environment in response to the West Link.

Mumbai Metro

The Mumbai Metro is one of 14 metro lines in various stages of planning and implementation (MMRDA, 2023). An initial masterplan covering all of the lines was approved by the Regional Development Authority in 2004 (MMRDA, 2023). The implementation of the masterplan was planned in three phases (MMRDA Archive, 2012). Construction of the first line began in 2006 and the aim is to complete all the lines by 2024-26 (MMRDA, 2023).

The 14 metro lines are being constructed through various partnerships between the Government of India, Government of Maharashtra state, and private parties, both national and international. The metros are expected to carry 10 million people daily and to decongest the city's chronic traffic for the next four to five decades (MMRDA, 2023).

The metro in focus, named in this thesis as the Mumbai Metro, has a 33.5km long corridor, consisting of 27 stations. It will be fully underground. It runs in the north-south direction, as shown in Figure 9. It is being constructed by the Mumbai Metro Rail Corporation Limited (MMRCL), a 50:50 joint venture between the Government of India and Government of Maharashtra. The metro got approval for construction in June 2013, construction began in 2014, and as it currently stands, the first phase is scheduled to be completed at the end of 2023 or early 2024. In general, the project has been plagued by several delays.

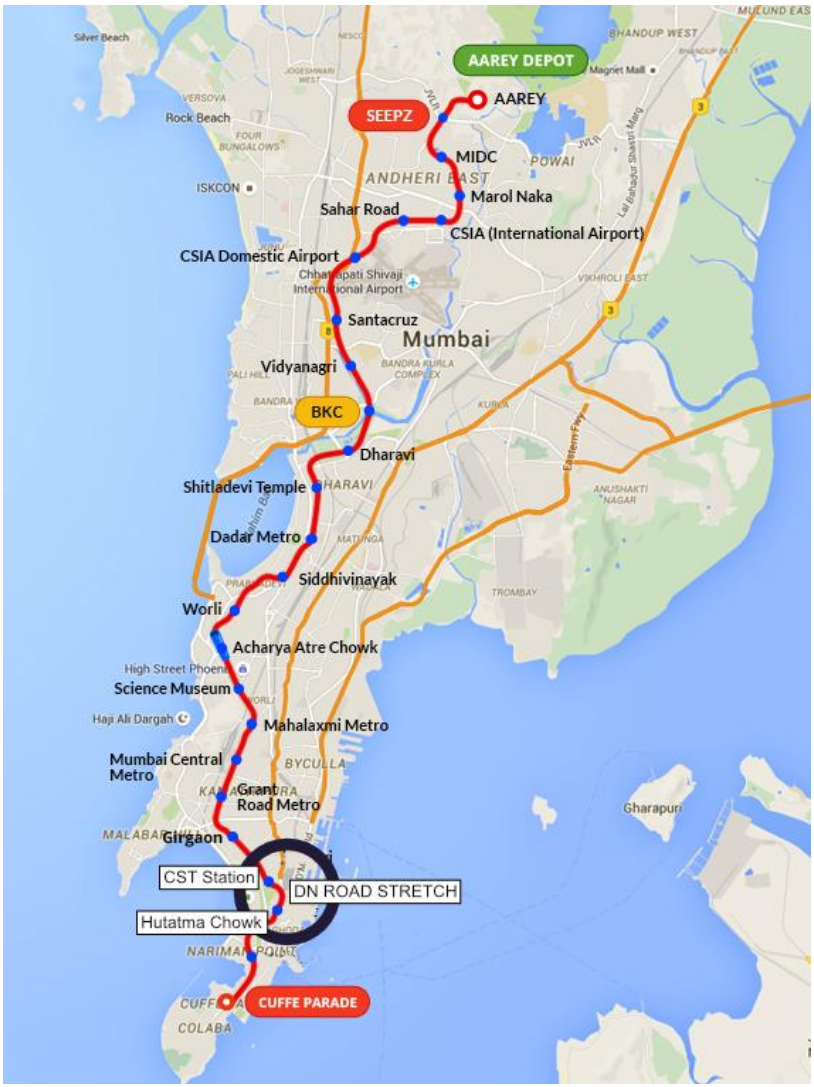

Figure 9: Route of the Mumbai Metro showing DN Road stretch

Base image source: MMRCL (2023b)

The Mumbai Metro aims to relieve pressure on the existing overground suburban railway lines. It also aims to improve connectivity within the wider Mumbai region and overall provide an efficient, fast, and sustainable means of transport (MMRCL, 2023a).

The rest of the section introduces the historic environment issues in the context of the Mumbai Metro.

Historic environment

The Mumbai Metro tunnels under several areas which are officially listed historic environments. These are called "heritage buildings and precincts", defined as such by the *Maharashtra Regional and Town Planning (MR&TP) Act 1966* (updated in 1994). "Heritage buildings and precincts" come on the "heritage list", a list issued by the Municipality. The metro passes under over 55 "heritage buildings" and four "heritage sub-precincts" (Rites and MMRCL, 2011: 4-65). Of the buildings, six are Grade I buildings, and the rest are Grades II and III (Rites and MMRCL, 2011: 4-61-64).

The official value of the "heritage buildings" is reflected in the criteria for their listing and "special features" as summarised by the Metro Rail Company (Rites and MMRCL, 2011: 4-61-64). The criteria mentioned by the Metro Rail Company correspond to descriptions in Mumbai's Development Control and Promotion Regulations (DPCR), which regulate construction in the city. Accordingly, the criteria for the affected buildings are collectively:

- Value for architectural reasons
- Value for historical reasons
- Value for cultural reasons
- The date (time period) of the building or artefact
- The design of the building or artefact
- Relevance to social or economic history
- Association with well-known persons or events
- A building or groups of buildings and/or areas of a distinct architectural design and/or style historic period or way of life having sociological interest and/or community value
- The unique value of a building or architectural features or artefact and/or being part of a chain of architectural development that would be broken if it were lost
- Value as a part of a group of buildings
- Representing forms of technological development
- Vistas of natural/scenic beauty or interest, including water-front areas, Distinctive and/or planned lines of sight, street line, skyline or topographical
- Open spaces sometimes integrally planned with their associated areas having a distinctive way of life and for which are and have the potential to be areas of recreation (DPCR, 2018: 448)

The Metro Rail Company also summarises the "special features" of the buildings (Rites and MMRCL, 2011: 4-61-64). These feed into the criteria mentioned above. For the buildings affected by the metro, the "special features" can be grouped into categories of architectural "style", design elements, material, physical relation to the wider area, and relation to historical figures. Some examples of the features, as mentioned by the Metro Rail Company (Rites and MMRCL, 2011: 4-61-64) are listed below:

- Architectural "style": Gothic, Neo-gothic, Oriental gothic, Italian Gothic, Indo-saracenic, Renaissance revival, colonial, vernacular, haveli
- Design elements: Multiple domes, pointed window arches, cantilevered window shades,
- Material: Blue basalt stone, grey stone, cast iron structure, glazed tiling engraved glass, Assyrian stone façade,
- Physical relation to the wider area: Part of arcaded street front, buffer between two architectural period styles
- Relation to historical figures: Sir Bartle Frere, Sir Jamsetjee Jeejeebhoy

The area also holds value from the point of view of Unesco World Heritage. One of the Grade I buildings, the CST railway terminus shown in Figure 10, is a Unesco World Heritage Site, as acknowledged by the Metro Rail Company (Rites and MMRCL, 2011: 4-61; Maple and MMRCL, 2020: 30; 190). The majority of the affected buildings and both the affected sub-precincts also lie in the "Victorian and Art Deco Ensemble" World Heritage Site. This is not mentioned by the Metro Rail Company in either of their two relevant documents, possibly due to the site being inscribed only later, in 2018.

The main issues with the historic environment in the Mumbai Metro concern Dadabhai Naoroji Road, popularly called DN Road, and the two officially valuable locations that it connects. The road lies between Hutatma Chowk at its southern end and the CST railway terminus at its northern one. Hutatma Chowk is a plaza and currently holds the Grade I-listed fountain called Flora Fountain, shown in Figure 11. CST railway terminus, as previously mentioned, too is Grade I-listed and a World Heritage Site.

Figure 10: CST railway terminus

Photograph: Dr. Raju Kasambe, CC BY-SA 4.0, via Wikimedia Commons

Figure 11: Flora Fountain at the Hutatma Chowk plaza

Photograph: Rangan Datta Wiki, CC BY-SA 4.0, via Wikimedia Commons

There are upcoming metro stations at both the CST railway terminus and the Hutatma Chowk plaza. As the Metro Rail Company states, permission for the metro's overground building elements was required from the Heritage Committee:

> "The proposed Corridor is fully underground and does not affect any Listed Heritage Structure so as to seek approval for the execution and operation of Metro Corridor. However, as the Corridor is passing through/along the Heritage Precincts and Hutatma Chowk and CST Metro stations are located

> in these Precincts, approval of Commissioner, [Municipality] through MHCC (Maharashtra Heritage Conservation Committee) will have to be obtained." (Rites and MMRCL, 2011: 0-xii)

The metro tunnel runs under DN Road, mentioned by the Metro Rail Company as a "historic and heritage street" and a "site characteristic" of the upcoming Hutatma Chowk metro station (Maple and MMRCL, 2020: 64). All the buildings on DN Road are listed and all of them are mentioned as being affected by the Mumbai Metro (Rites and MMRCL, 2011: 4-62). At around 36 in number, they form the bulk of affected "heritage buildings". These buildings have all the above-mentioned criteria for listing, barring the last one related to open space. The road also borders two of the affected sub-precincts. A street view of DN Road is seen in Figure 12.

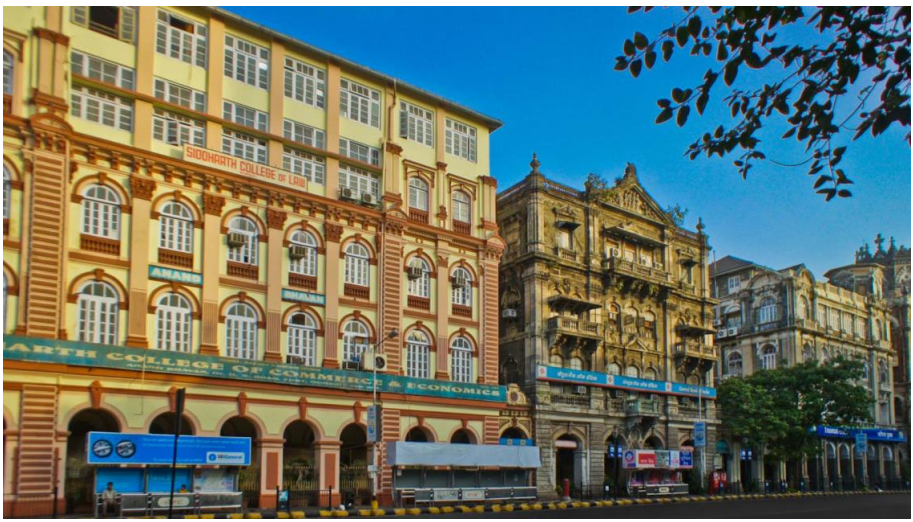

Figure 12: Street view of DN Road

Photograph: Udaykumar PR, CC BY 3.0, via Wikimedia Commons

The discussions between the Heritage Committee and the metro developers are against this background of the area's officially value.

Overall, in the two cases, the thesis focuses on the official historic environment issues that came up in planning, as discussed by actors in the process. However, in both the West Link and Mumbai Metro, there were mobilisations around other issues and by non-official actors as well. In the West Link, there were protests against the felling of trees, the congestion tax for the building of the project, and

costs, to name a few (Fredholm et al., 2019: 21). In the Mumbai Metro, there was a range of issues, including tree felling, displacement of people, and others (Karkaria, 2017; Borpujari, 2019). These are mentioned here to provide broader context of the issues in the project. The thesis, however, focuses on the officially designated historic environments.

Chapter 5: Compensation in law and policy

Compensation is a response to environmental loss caused by planning projects. It's provision in law and policy is based on the premise that environments have certain values that are lost due to the construction of these projects. In order to understand compensation for loss of historic environments, it is essential to study how compensation is understood in law and policy. This chapter outlines and analyses compensation in Swedish law and policy.

The chapter is divided into three sections. The first section is an introduction to compensation, the second section discusses various laws and policies; and the third section discusses the specific approach of the Swedish Transport Administration (STA) with respect to compensation. The discussion in the chapter borrows from various official documents, and also heavily from Persson (2011), a civil engineer and landscape planner who has written extensively about environmental compensation. Throughout the chapter, the word compensation is used according to its usage in the documents.

Introduction

Environmental compensation is a response to specific loss or damage of the environment, caused by human activity (Persson, 2011: 16). Such activity results in loss of an "environmental value" or "miljövärde" (Persson, 2011: 16). Environmental compensation in planning, based on prevailing definitions as understood by Persson (2011: 13-14), stems from seeing planning projects as a threat, and causing negative consequences to important aspects of the environment. Accordingly, compensation is a response that must be connected to the specific loss in some way (Persson, 2011: 16).

Compensation kicks in when environmental loss cannot be prevented. It counterbalances the loss by adding positives which either level out the loss or add additional value to the environment. The definitions that Persson (2011: 13-14) borrows from to flesh out an understanding of compensation stress newness, additions, or improvements: "positive development of environmental quality"

(Swedish Road Administration, 2002: 62, author's translation), "positive environmental measures" (Cowell, 2000), "equalising the loss or increasing the environmental values" (Pettersson, 2004: 3), "upgrading" (Skärbäck 1997: 30, author's translation), "net neutral or beneficial outcome" (McKenney 2005: i), and "improvement of the ecological quality" (Cuperus, 2004: 10-11, in Persson, 2011: 13-14). These positives are seen as neutralising forces to the negative effects of the development, in some cases even improving upon what was earlier there. Söderqvist et al. (2021: 2) also write about understanding compensation beyond the lens of "no net loss", instead expanding that to "net gain".

Overall, the loss of environments is considered undesirable and environments are considered through two metrics: their values and the site itself. The rest of this section discusses how compensation came to be a tool for dealing with environmental loss, as well its relation to values and site.

History

From its inception, compensation was seen as a way to mediate the twin goals of planning projects and environmental conservation. Compensation as a tool in policy began to take shape in Sweden in 1995 when the National Board of Housing, Building and Planning was tasked by the national government to come up with an action plan for "conservation and sustainable use of biological diversity within the built environment sector" (Persson, 2011: 9, author's translation). The action plan mentioned biotope compensation, though very briefly and superficially, pointing to the need to develop the compensation concept further (Persson, 2011: 9). It considered not only compensation for biotope loss important, but also the construction of planning projects (Persson, 2011: 9).

A later government investigation in 1997 pushed for systemising compensation for loss of environmental values more generally. In this, the concept of environmental compensation crystallised further. The investigation looked at compensation in a positive light, as a preventive against the depletion of biodiversity and a deterrent to developers, by dissuading projects in sensitive areas as this would come with a condition to compensate (Persson, 2011: 11). The proposals of the investigation found their way into the Environmental Code (Persson, 2011: 11-12). The Environmental Code regulates planning projects with respect to the environment. It is discussed in further detail in a later section.

Compensation, in the investigation, was framed in terms of re-creation of "natural values" when their protection was not possible (Persson, 2011: 12). The proposed prioritisation was in order of:

1. Re-creation of the "natural values" on the same site
2. Re-creation of the "natural values" on a different site
3. Funding the protection and care of another threatened area

This schema separates the values of the environment from the physical site of loss. Despite the distinction, these are however often conflated, given that the re-creation of a biotope can be linked to the re-creation of the values it yields.

The investigation discussed compensation, not only for biotopes, but for certain other types of environments as well (Persson, 2011: 11). It mentioned compensation for damage to "culture reserves" among other forms of environments, including "nature reserves" (especially valuable forests, mountains and the like), wetlands, and "naturminne" (especially valuable forms of nature), among others (Persson, 2011: 12). "Culture reserves" are areas that can have both "natural" and "cultural" values, and can have buildings, remains, physical spaces, traditions, practices, knowledge, etc. (National Heritage Board website, n.d.). Even though the investigation acknowledged environments from a social sciences perspective, it did so in a limited way; only through "culture reserves". It further stated that the re-creation of "kulturhistoriska miljöer" or "cultural-historical environments" was "impossible" (Swedish Government, 1997). In this way, compensation for historic environment loss was deemed undesirable from the very beginning.

From its inception, the history of compensation in Swedish law has considered the "environment" from a natural sciences perspective. This perspective prioritises environments that yield biodiversity, oxygen, and the like. In this way, compensation came to be defined through re-creation and relocation of environments for their *natural* values. These actions are considered anathema for environments with cultural or historic values. However, compensation for natural value loss came to be used as a starting point for compensating historic value loss as well (Nordblad, 2014: 21-22). This is clear from the investigation in 1997 that stated that although its assignment "primarily aims at interventions in the natural environment, there are good reasons to treat the cultural environment in a corresponding way" (Department of Environment, 1997: 50, author's translation). Here "natural environments" refers to environments with natural values, and "cultural environment", those with cultural or historic values. In any case, the

statement reflects that historic environments got subsumed into the "natural environment" category.

Values and site

Compensation for environmental loss is based on the loss of values and site. Values are different from the site, as well as from "functions" (Persson, 2011: 42-43). According to Persson (2011: 43-44), values are intangible qualities such as those that contribute to the experience or beauty of a place. Functions are the practical work that the environment does in contributing to human wellbeing (Persson, 2011: 42-43). Functions can include water purification, climate regulation, control of erosion, etc (Persson, 2011: 43). Grass, for example, is an environment that has the function of controlling soil erosion (Persson, 2011: 42). According to this understanding, values and functions are the intangible benefits that the affected physical site affords.

Values and functions, as defined by Persson (2011: 42-43), are similar to "services" in the ecosystem services understanding of the term. Ecosystem services are the services offered by "nature" to humans (Environmental Protection Agency, n.d.). These services comprise provisioning, regulating, cultural, and supporting services, and can range from enabling photosynthesis to providing drinking to affording outdoor activities (Environmental Protection Agency, n.d.). Overall, functions, values, and services indicate the importance attached to physical sites.

Values and site are implicated in compensation, wherein compensation is discussed as either being on or off the site of physical loss. "On-site" is dependent on how it is defined in the project, ranging from near the location of loss to within the same planning area, to a "functional context" connected to the site (Persson, 2011: 50).

The degree to which values and site individually play a role in compensation is based on the intentions of the compensation in the case. Persson (2011: 41) classifies compensation measures in three ways: object-oriented, place-and-type-oriented, and goal-oriented. Object-oriented compensation focuses on the affected object or site and replacing that in order to acquire the lost value or function. So a destroyed tree (object) is replaced with a similar tree (object), which implicitly replaces the lost shade (value). Place-and-type-oriented compensation focuses more specifically on the value or function of the affected environment, emphasising their type and location (Persson, 2011: 44). Here, a destroyed tree

(object) can be replaced with another type of plant that steps in for the lost shade (value) provided by the previous tree. Place-and-type-oriented compensation is expressed in the investigation put forward in 1997 and in the balancing principle and damage mitigation hierarchy described in the next section. Goal-oriented compensation is about the creation of new types of environments with corresponding new values, based on local, regional, and national environmental goals (Persson, 2011: 46). Here, the lost tree (object) could potentially be replaced with some other physical environment altogether, unrelated to vegetation or shade (value), to meet the needs of the area in a broader context.

Law and policy

Investigations into compensation in the 1990s found their way into compensation thinking in law and policy. This section looks at law and policy through five sub-sections: the balancing principle, damage mitigation hierarchy, Environmental Code, Planning and Building Act, and Historic Environment Act.

Balancing principle

The German balancing principle is the basis for compensation in law and policy in Sweden. The principle lays out compensation as part of a step-wise hierarchy of responses to dealing with the environment in the face of planning projects. The hierarchy, in order of most to least preferable is:

1. Avoid damage
2. Minimise damage
3. Compensate for damage (Persson, 2011: 19)

The balancing principle was introduced into Swedish debate on compensation by the landscape architect, Erik Skärbäck in the mid-1990s (Persson, 2011: 128). It was adopted in the Swedish system with the last step being split into compensating on the same site and, less preferably, on a different one (Persson, 2011: 19).

Balancing, in principle, was meant to be applicable to "cultural values" in addition to "natural" ones. As Skärbäck (1997a: 9, in Persson, 2011: 129) writes, balancing means not removing "more of our natural *and cultural values* than one gives back" [emphasis added]. Skärbäck (1997a, in Persson, 2011: 130) mentions five types of resources that yield values. Of these, the only historic environment related one is "landskapsbild/kulturmiljö" ("image of the landscape/cultural environment"). The other four types of resources are land, water, biotopes, and air/climate/noise (Skärbäck 1997a, Grip et al. 1999, in Persson, 2011: 130). The

"image of the landscape/cultural environment" resource type is considered to yield values as varied as ancient remains, experiences, cycle paths, cultural history, and others (Skärbäck 1997a, Grip et al. 1999, in Persson, 2011: 130). What constitutes historic environment values is unclear, but they are considered in some form, as a mix of intangible and tangible elements.

Damage mitigation hierarchy

The three-step balancing principle was adopted in Sweden as the four-step damage mitigation hierarchy. The damage mitigation hierarchy is advanced by the National Board of Housing, Building and Planning (2018) and the City of Gothenburg (2008; n.d.), among other authorities. The National Board of Housing, Building and Planning (NBHBP) provides, among other things, guidance to municipalities on compensation for loss of "green" areas and ecosystem services (NBHBP, 2018; Swedish Government, 2017: 319).

The NBHBP (2018) proposes the hierarchy, for the preferred order of actions in response to loss caused by planning projects. The most to least preferred actions are as follows:

> "1. Avoid negative impact - choose another location, protective measures, strengthening measures
>
> 2. Minimise negative impact - protective measures, strengthening measures
>
> 3. Compensate negative impact - restore value in the immediate area, certain strengthening measures
>
> 4. Compensate negative impact - replace by measures elsewhere or of different value" (NBHBP, 2018, author's translation)

The first two steps are protective measures, the second two steps are compensation measures. Compensation measures cover the re-creation of the lost "ecological values" or ecosystem services, either on the same or different site (NBHBP, 2018). Further, as Figure 13 shows, even within the four compensation measures, the most preferable is to re-create the same value on-site, as represented by the third step. The other three options are collectively on the fourth, and least preferred, step. This indicates a hierarchy even within compensation measures, wherein sameness (of both value and site) is most preferable. Overall, in Persson's (2014: 24) view, the damage mitigation hierarchy "locks one" into thinking only through the lens of geographical and functional proximity. It ignores the context and specificity of the case at hand.

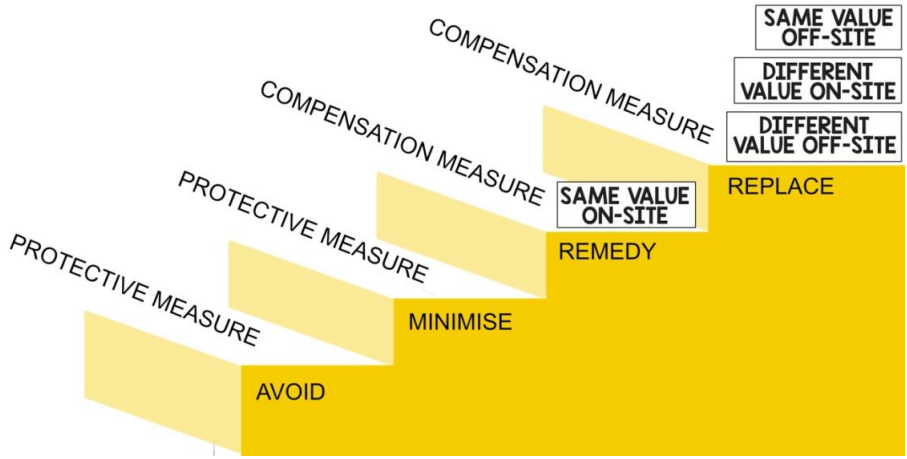

Figure 13: Compensation options mapped on the damage mitigation hierarchy

Base image source: National Board of Housing, Building and Planning (2018)

The closest the model comes to considering cultural or historic values is through its applicability to ecosystem services. Ecosystem services include the category of cultural ecosystem services which comprise "beauty, inspiration, recreation and spiritual values that contribute to our well-being" (Sweden Government, 2013: 7). Even so, cultural ecosystem services are attached to environments as understood from a natural sciences perspective, as seen in the types of environments considered by the National Board of Housing, Building and Planning (n.d.). They mention the suitability of the damage mitigation hierarchy to woodlands, green areas, wetlands, habitats for endangered species, various types of trees and shrubs, beaches, forests, and others (NBHBP, 2018). Overall, the damage mitigation hierarchy is geared more towards environments as understood from a natural sciences perspective than a social sciences one (Larsson, 2020: 231). The hierarchy is further considered unsuitable for compensating loss of historic values of the environment. These values, unlike natural ones, are not quantifiable, and concern qualitative aspects and experiences (Grahn Danielson et al., 2013: 3; Larsson, 2020: 231). Their re-creation and/or relocation by way of re-creation and/relocation of the lost sites themselves, is therefore viewed with scepticism (Unesco et al, 2022: 45).

Environmental Code

The most significant compensation legislation comes from the Environmental Code or "Miljöbalken" (1998). This is a law that has its scope in aiming for sustainable development, and among other things, covers the conservation of the environment, which in principle, is understood through both natural and social sciences perspectives.

Compensation is mentioned in the Environmental Code as "kompensation". It is at times mentioned in the context of "avhjälpa" or remediation and also as "ersätta" or replacement. Neither compensation nor remediation is defined.

Chapter 2, Section 8 of the Code states that damage to the environment must be remedied, barring which it may need to be replaced. While the word compensation is not used here, replacement refers to the same activity, seeing as replacement is the fourth step on the damage mitigation hierarchy.

Compensation is mentioned in the context of "natural values" in Chapter 7 of the Code. In this provision, compensation for nature or culture reserves can be carried out in the same area (i.e., in the reserve) or in another area. Nature reserves include especially valuable forests, mountains, meadows, and the like. Culture reserves can have a range of elements, including buildings, traditions, remains, and so on (National Heritage Board, n.d). The categories of nature and culture reserves are legally designated. Even though "culture reserves" are considered, the provision for compensation is only applicable to their "*natural* values" (emphasis added).

Compensation is also provided for in the context of certain environments accorded special protection in the law. These are Natura 2000 areas, i.e., significant for wild birds under the Bird Directive, and areas significant for wild flora and fauna, under the Habitats Directive. Here the Environmental Code mentions "miljövärden" or "environmental values", but the environments considered for compensation are valuable for the plant and animal life they sustain.

In Chapter 10, Section 1 of the Code, compensation is mentioned as a subset of remediation. This section deals with activities that cause environmental damage through contamination of the area and other risks to human well-being. Remediation here refers to actions carried out to remedy damage after it has been done. Compensation is applicable only to damage to water bodies or ground water areas, Natura 2000 areas, certain breeding and resting areas, and certain species. The section mentions compensation in the context of affected "miljövärden" or

"environmental values" however, the environments covered are only those that are important for certain kinds of animal life.

Compensation for damage to public interests can be linked to permits and their revocation as stated in Chapter 16, Section 9 of the Code. Public interests in principle include historic environments. This is seen in the case of "national interests", which can be designated as such based on their "cultural values". So, "cultural values" are considered important when they are public interests. Lerman (2014: 40) however notes that this condition for compensation can only be used in very specific cases, which means it is rarely used, and damage can remain uncompensated for.

Compensation does not find mention in the context of Environment Impact Assessments (EIAs), dealt with in Chapter 6 of the Code. This chapter states the purpose of the assessments is integration of the environment into planning and for sustainable development. Other actions towards the environment are mentioned, such as the assessments having to contain information on how the projects will "förebygga, hindra, motverka eller avhjälpa" ("prevent, hinder, counteract or remedy") negative environmental consequences. The omission of compensation has also been pointed out by Rundcrantz and Persson (2011: 125).

Overall, the Environmental Code considers "environments" and "values" from a natural sciences perspective. When historic environment values are considered, this is not in the context of compensation. Where historic environments, i.e., in the case of "culture reserves" are considered, compensation is for damage to their "natural values". So, there is no intersection of historic values, historic environments, and compensation. Accordingly, compensation for loss of historic values within the Code is only possible by those values piggybacking on affected *natural* values. This is possible, for example, in the case of a damaged stone fence or an avenue that doubles up as a biotope (Rundkrantz and Persson, 2011: 127).

There is critique of the Environmental Code from various quarters, for its skew in emphasis towards environments with natural values. As stated by the national government in an investigation, "cultural values" need to be included (Swedish Government, 2017: 34). From a theoretical perspective, Grahn Danielson et al. (2014: 12) argue that the Code marginalises the social sciences perspective of environments, making it hard to develop compensation specific to historic environments.

Planning and Building Act

Compensation is possible within certain provisions of the Planning and Building Act or "Plan- och bygg lagen" (PBL) (2010). This law concerns regulations around detailed plans, master plans, zoning, area development, and other aspects concerning new building projects. PBL does not have any provision for obligatory compensation, but it can come into play through other instruments in the act.

Compensation can be mobilised through the provisions for "exploateringsavtal" or development agreements, laid out in Chapter 6. Within the scope of this provision, municipalities can enter into voluntary agreements with developers through which they can demand compensation. As PBL defines them, such agreements are entered into by the municipality with a developer or property owner for land not owned by the municipality. The developer or property owner is not the Swedish state and the issues do not concern the expansion of transport infrastructure by the state. Within this provision it is, in principle, possible to operationalise compensation for damage to environments that do not fall within the categories mentioned by the Environmental Code.

The municipalities of Gothenburg, Västerås, Stockholm, and Helsingborg are among those that have drafted a compensation policy for its deployment through PBL. The extent of compensation through PBL is unclear, as a survey by the Swedish Society for Nature Conservation in 2003, indicates (Persson, 2011: 135). In their comparison of the approaches to compensation across five Swedish municipalities, Söderqvist et al. (2021) also show that there are inconsistencies in approaches to compensation and a need to streamline these. Nevertheless, municipalities are favourably disposed towards environmental compensation in principle (Persson, 2011: 135). Below is a look at Gothenburg City's compensation policy under PBL in greater detail.

Compensation through voluntary agreements in Gothenburg

The Gothenburg City model for compensation works within the provisions of the PBL and is a response to the lacunae in the Environmental Code that considers only certain types of environments (Gothenburg City, 2008: 7). Gothenburg City deploys compensation via its "Sans och Balans" (Sense and Balance) initiative of 2001. Compensation is for lost "natural" or "recreation values" as well as ecosystem services within the site of the planning project or elsewhere in the municipality (Gothenburg City, 2008: 5; Gothenburg City, n.d: 5).

Gothenburg City (2008: 8) uses the damage mitigation hierarchy as its compensation model. Accordingly, the preferred options are first to avoid and then minimise damage. If these fail, compensation kicks in. Compensation comprises preferably, "utjämna" (remedy) and secondarily, "ersätta" (replace). These are intended to re-create lost values on-site or off-site. This model is the same as the one used by the National Board of Housing, Building and Planning (NBHBP).

The principle for compensation measures adopted by Gothenburg City is called "närhetsprincip" or proximity principle. This means that measures should as far as possible be close in time, place, and value, i.e., take place as soon as possible, be in physical proximity of the damage, and be closely connected to the lost value (Gothenburg City, 2008: 13). In a follow-up, they revise this to closeness in time, place, value, and function, stressing that compensation must re-create the value corresponding to the lost function (Gothenburg City, n.d.: 11).

Gothenburg City (2008: 12; n.d.: 10) differentiates between "functions" and "values". Compensation measures apply to "functions" that have high "value" (Gothenburg City, 2008: 12-13; Gothenburg, n.d.: 9). Function is purely the property or quality of the lost physical object or environment, such as being a habitat for animals or plants or a place for walking (Gothenburg City, 2008: 12). Value is a subjective ranking of the importance of this function in that particular context (Gothenburg City, 2008: 12). So lost functions are not enough to warrant being compensated for. They must also be important, i.e., have value. For instance, a grove that has a function as a recreation area may have a higher value in a dense city where there are few others, and lower value in a rural setting (Gothenburg City, 2008: 13). Re-creating the grove on a new site, for example, in a dense city centre, can mean it has potentially greater value than before (Persson, 2011: 160). Values are relative and measured in terms of a scale comprising "large", "moderate", and "small" (Gothenburg City, n.d.: 11). The value scale in terms of large, moderate, and small corresponds to whether compensation is an absolute must, whether there is a large/moderate need, or whether unrequired, unless a large number of small values is affected (Gothenburg City, n.d.: 11).

In differentiating between functions and values, compensation as laid out by Gothenburg City (2008; n.d.) recognises the subjectivity of loss in planning projects. It acknowledges values, functions, and (ecosystem) services of the environment rather than the environment in physical terms alone. This is a move away from object-oriented compensation (Persson, 2011: 141). Yet, in terms of environments, its focus is on environments with natural or recreational values.

Historic environments are not considered, and historic or cultural values of environments are considered only marginally. The values are considered under "kulturhistoria" ("cultural history"), which forms part of the considerations when assessing the need for compensation (Gothenburg City, n.d.2; Gothenburg City, 2019). Persson (2011: 137) levels a related critique when he notes that Gothenburg City does not speak of environmental compensation in general, but rather only for "nature and recreation". Gothenburg City (2008: 19; n.d.: 15) too acknowledges their omission of compensation policy for historic environments.

Overall, the Planning and Building Act (PBL) allows for greater scope of compensation, by way of types of environments covered, than the Environment Code. It is then up to the municipalities to formulate compensation policy, which as seen in the Gothenburg example, may still end up marginalising environments with historic or cultural values. This lack of representation of historic environments points to their double marginalisation, i.e., first in the Environmental Code, and then in the PBL-enabled Gothenburg City policy.

The compensation provisions in the Environmental Code, Planning and Building Act, and Gothenburg City's policy do not come into play in the West Link case.

Historic Environment Act

Compensation is absent in the Historic Environment Act or "Kulturmiljölagen" (1988). The Act governs the protection and conservation of historic environments. Historic environments, in this context, cover place names, ancient monuments and remains, listed buildings, and ecclesiastical cultural heritage.

Section 1 of the Historic Environment Act states that damage to the "cultural environment" must be "undviks" (avoided) or "begränsas" (limited). While not discussed in terms of the damage mitigation hierarchy, these two actions correspond to protection measures of the hierarchy's lower two steps.

Conceptually speaking, Persson (2014: 14) writes that compensation in relation to cultural or archaeological elements can sometimes be considered to take the form of knowledge creation or dissemination (Ross, 2020). While the Act does mention these actions, as in Chapter 2, Section 13, it does not do so within the formal nomenclature of compensation (Persson, 2014: 14). Further, whether such actions can be called or counted as compensation is contentious. As some authors see it, documentation can preserve a small part of the value by preserving the

knowledge of the historic environment but cannot count as compensation for what is lost (Grahn Danielson et al., 2013: 5).

Overall, the three laws discussed above barely consider historic environments as tenable for compensation. Compensation is disproportionately in favour of environments having natural values. These environments form the blueprint for compensation provision in law.

Swedish Transport Administration

The Swedish Transport Administration (STA) is crucial to the discussion on compensation, given that it is the main actor in the West Link. More generally, it has a significant role in transforming the environment through various infrastructure projects.

The STA proposes the "fyrfältaren" or four-field model for compensation for damage to the environment (STA, 2021a: 15). The model considers four possible combinations of grouping type of value affected and its location. These are:

- Re-creating the same type of value on-site
- Re-creating the same type of value off-site
- Re-creating a different type of value on-site
- Re-creating a different type of value off-site (STA, 2021a)

The four-field model consists of the same four compensation options as the damage mitigation hierarchy. However, unlike in the damage mitigation hierarchy, the STA (2021a) does not entirely fix a priority order for the four compensation actions. On one hand, it allows the possibility for a prioritisation, where the prioritisation prescribed is according to the above order from most to least preferable (STA, 2021a: 15). However, it also provides the option of choosing measures based on the goals for the area (STA, 2021a: 15). The damage mitigation hierarchy, however, favours the re-creation of the same type of value on-site to all the other three options. Accordingly, compensation as understood by the STA is more flexible than that in the damage mitigation hierarchy.

To use Persson's (2014: 23) conceptualisation, the STA's (2021a) approach of not prescribing a priority order reflects a goal-oriented strategy to compensation. This means choices are made based on the case at hand and the goals for the specific area. According to Cuperus et al. (1996: 46, in Persson and Hedlund, 2014: 90) the decision on type of value and site should be taken on a case-by-case basis instead of following any blanket prescription of standards.

The STA (2021a: 17) sees the environment in broad terms, which includes historic environments. Even so, they have an uneasy relationship with dealing with historic environment loss through compensation. Unlike for other environments, when it comes to historic environments, they *do* propose the priority order for using the four-field model (STA, 2021a: 16; 40). The most preferable option is to re-create the same value on-site, which expresses the need for the new historic environment value to be as close to the affected site as possible (STA, 2021a: 15-16). This is "rooted in the idea that the intervention [from the planning project] should be as small as possible" (STA, 2021a: 15-16, author's translation). Despite allowing for re-creation of the same value on-site, they also assert that compensating for loss of the values of historic environments is hard when it comes to creating the same value in the spot where the project affects it (STA, 2021a: 12). As for relocation of values, they consider moving remains and buildings to be detrimental to their contexts even if the appearance and contents are retained (STA, 2021a: 12). Compensation by way of replacement of historic environments too is considered undesirable. So, while they state that "natural environments" must be "replaced with equivalent environments" (STA, 2021a: 15), for historic environments, they mention the need for "measures to strengthen" them (STA, 2021a: 15).

"Strengthening" is a compensation-adjacent term and concept that runs through the STA's work. Strengthening can involve "making visible" the historic remains and environments next to their affected locations, making available information, and "re-creating broken connections" to increase legibility of the overall environment, something that infrastructure projects make possible (STA, 2021a: 12). The terminology is not always clear, seeing that elsewhere they also refer to strengthening *as* a form of compensation for historic environment damage (STA, 2019: 10). Nevertheless, regardless of the terminology, there is a reluctance to endorse re-creation or relocation of damaged historic environments, as with "natural environments". This attitude echoes the "impossibility" of re-creating historic environments as mentioned in the governmental investigation on compensation in 1997 (Swedish Government, 1997).

Overall, the STA does consider historic environments in compensation or strengthening, however, in different terms from environments with natural values and to a lesser degree. They do not endorse re-creation or relocation of environments when it comes to historic environments, but they do seek to work with these environments in ways that go beyond material preservation (STA, 2019; STA, 2021). This is seen in their aims to use, develop, and enhance the historic

environment (STA, 2019: 8; 10) and to work with even those historic environments not protected by the law (STA, 2019: 11). They acknowledge the gaps in knowledge and procedures for historic environment compensation and see the importance of these being put in place (STA, 2021a: 41-43).

What emerges from an overall analysis of some of the relevant laws and policy related to compensation in the Swedish context is that compensation, as a response to planning projects, is understood in terms of re-creation or relocation of values of the affected environments. This can connote the re-creation or relocation of the environments themselves, depending on the compensation strategy. Compensation is most often considered the last option when it comes to dealing with environmental loss. Further, it is most often directed towards the *natural* values of the environments. The only available provisions in law for conservation of historic environments are through their preservation. Where historic environments are discussed, re-creation or relocation of the environments is considered undesirable, and tools to deal with historic environment compensation, whatever that might mean, are lacking. Nevertheless, "strengthening", as being developed by the Swedish Transport Administration, is an emerging alternative.

Chapter 6: Compensation in theory

The legal and policy provisions for compensation for historic environment loss are inadequate, as shown in the previous chapter. In response, scholars push for formulating an understanding of such compensation in planning. This chapter outlines and analyses how some of this research characterises compensation. The chapter relies on the work of Magnus Rönn, Benjamin Grahn Danielson, and Stig Swedberg, who, backed by the National Heritage Board, began investigating historic environment compensation with respect to formal planning in Sweden in 2013.

The chapter is divided into three sections. The first section discusses compensation that starts in a matrix of values and site. The second section discusses compensation in planning beyond this matrix. The third section is a brief discussion of compensation as a concept, outside the planning context. Throughout the chapter, the word compensation refers to its characterisation and usage by the various authors, with respect to historic environments.

Values and site

Compensation in response to planning projects considers the values lost and the affected sites. It can be a suitable way of managing historic environments in moments of change (Rönn et al., 2017) and a tool to "redress insufficiencies" and "to recreate lost heritage values and/or repair damages on listed buildings with architectural qualities" (Rönn and Grahn Danielson, 2020: 7). Grahn Danielson et al. (2013: 6) see compensation as targetting the loss of qualitative aspects of the environment, and valuation, as considering the people in the area. They argue for a more streamlined process of compensation and for it to be incorporated into planning (Grahn Danielson et al., 2013: 12).

Grahn Danielson et al. (2013: 6) flesh out the limits of compensation within the Swedish planning framework. They define it as a response to a new project in a historic environment; one that causes loss to the environment and warrants physical measures to counter the loss (Grahn Danielson et al., 2013: 6). Additionally, the compensation measures must be regulated in an agreement and

executed within a specific time (Grahn Danielson et al., 2013: 6). They use this definition to characterise responses in various cases as compensation.

The rest of this section is divided into two sub-sections. The first presents the matrix used by the authors to evaluate the type of compensation found. The second looks at compensation in Swedish planning through formal detailed plans drawn up by municipalities.

Matrix of values and site

The authors characterise responses in certain cases as compensation based on their definition and then go on to analyse its nature. The analytical lens consists of the same four options advanced in the damage mitigation hierarchy (NBHPB, 2018; Gothenburg City, 2008), and by the STA (2021a). Accordingly, Grahn Danielson et al. (2013: 8) attempt to understand compensation for historic environment loss as:

- Re-creating the same type of values on-site
- Re-creating the same type of values off-site
- Re-creating a different type of values on-site
- Re-creating a different type of values off-site

"On-site" and "off-site" refer to whether the location is within the planning area or outside it, and not necessarily to the exact site of loss.

The four options are arranged in a matrix in no hierarchy of preferences, as seen in Figure 14. They are used as a theoretical tool to make sense of compensation in the planning processes of various projects (Rönn et al., 2017). For the authors, the matrix forms a lens for analysis rather than a roadmap for practice.

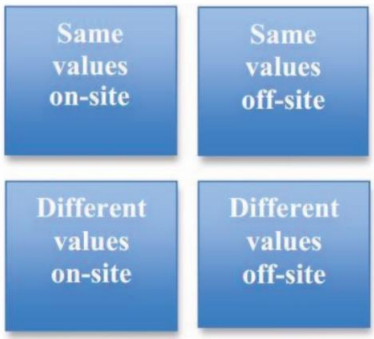

Figure 14: Matrix of values and site

Source: Grahn Danielson et al., 2013: 8

In the top left quadrant, the type of values and their spatiality are connected, while in the bottom right, there is no connection between the values lost and where. The approach in the top left quadrant is closest to damage minimisation – it tries to re-create the same values on or close to the site of their loss. The approach in the bottom right quadrant is where both parameters (values and site) are altered. This position is furthest from the status quo.

Detailed plans

Rönn et al. (2017) apply the matrix to various cases of compensation in detailed plans. A detailed plan is a legally binding plan that outlines the development and land use regulations for a specific area within a municipality. It specifies how land and water bodies within that area should be used, and it helps ensure that new development projects align with the municipality's overall development goals and zoning regulations.

Compensation in detailed plans, as expressed through the matrix, reveals an uneasy relationship of values to the site and to buildings or objects. This is discussed here through two cases. In the case of the construction of a new housing project in a Folkets Park or public recreation space in Linköping, some of the historic buildings came into focus in the planning process (Rönn et al., 2017: 82-84). The plan involved relocating one of the old buildings to a site within the detailed plan area and one of them outside it (Rönn, 2014a: 122). The authors characterise the relocation within the plan area as same-value-on-site type of compensation, and the relocation outside it, as same-value-off-site type of compensation (Rönn, 2014a: 122-123; Rönn et al., 2017: 83-84).

The same-value characterisation of compensation types indicates an equivalence between value and building (Dore, 2022: 107-108). The equivalence expressed by the authors is possibly because the professional valuation used in the analysis of the case emphasised the buildings' architectural and historical values (Nelson, 2009, in Rönn, 2014a: 113-114). Accordingly, compensation was based on the loss of values as pertaining to the physicality of the buildings themselves. Despite one of the buildings gaining a possible new value through use as a community meeting place for the residents (Rönn, 2014a: 108; 112), the authors do not consider the response as a case of different-value compensation. So, compensation is for lost values that are innate to the building material, and the introduction of contemporary values are not viewed as compensatory.

Further, value is considered to be embedded, not only in the buildings, but also in the site of these buildings. The authors indicate an uncertainty as to whether the relocation of buildings to a new spot changes their value since they "lose their original context" (Rönn et al., 2017: 84). While the potentially changed value is not spelt out, their uncertainty shows that values are susceptible to change, when the objects or buildings to which they are attached, move locations.

In another case, a new construction was planned in the place of a historic steam ferry terminal in Helsingborg. Compensation was expressed through the relocation of the historic building by 70m and demolition of later extensions made to it. It was also expressed through the installation of information signs about the historic building and public space design at both its old and new locations (Rönn, 2014: 234). Rönn et al. (2017: 88) characterise the compensation as same-value-on-site and different-value-on-site. Same-value-on-site compensation is seen in the relocation of the building and removal of its newer extensions (Rönn, 2014b: 234). Different-value-on-site compensation is seen in the installation of information signs and new public spaces both at the site of damage and at the new site of the terminal (Rönn, 2014b: 234). This understanding of compensation shows that the old building represented the same value, and new additions such as the signage and public space design represented new values. In this case again, there is an equivalence between value and object or design, whether same or new. Further, the move of the building by 70m was not seen as changing its value. Its value moved with it, as suggested by Rönn (2014b: 234). He explains the re-creation of values of the ferry terminal on the new site, where the value is in "the experience of a historic port environment" (author's translation).

Compensation through the matrix is further mired in the definitions of "on-site" and "off-site". The definition of "same-site" compensation as anywhere within the planning area does not do justice to the potential change in values that can result from uprooting buildings. This is seen in the move of the steam ferry terminal by 70m – despite being within the official bounds of the detailed plan, some professionals see the new location as being "off-site" (Rönn et al., 2017: 88). Compensation that is characterised as "on-site" can end up papering over relocations, simply because of the delimitations of the official planning area. Further, if value can indeed change with change in location, as the authors suggest (Rönn et al., 2017), then "site" does not require its own category at all, as it is only important in the service of values.

The matrix excludes the metric of building or object, and presumes separability between values and site. However, an analysis of the way the authors understand

the various compensations in the cases shows that values are highly entangled with buildings/objects and sites. The linkages, however, often go uninterrogated. Further, studying compensation at the level of the detailed plan ends up being limited in scale and restricted to the values of isolated buildings and areas.

More generally, compensation through information signs and digital tools is debated. Ross (2020) sees this as valid compensation and a move away from material preservation in the face of inevitable loss. Archaeological documentation as compensation is a means of preserving the knowledge about excavated remains when the remains themselves are lost (Ross, 2020). Axelsson (2015: 197) shares this view – when loss is unavoidable, creation needs to trump preservation. For him, the bottom two quadrants of the matrix, corresponding to different values, are more creative and aspirational than the top two that correspond to the same values (Axelsson, 2015: 197). He sees the move from top to bottom quadrants as a radicalisation of conservation practice, as they conceive of new ways of thinking about valuable historic environments (Axelsson, 2015: 197). In practice, however, there is pushback. The design of new objects with new values (Rönn et al., 2017: 86) can be critiqued for being low-effort responses to large planning projects. This is the case in the construction of a wind farm close to a historic site from the Bronze and Iron Age (Rönn et al., 2017: 85). The site was in the wider planning area of the project and expected to suffer noise and visual hindrances from the project. According to the regional authority, an early proposal for compensation by way of signage and information about the area was a "cheap solution" to a massive negative impact (Rönn et al., 2017: 86). This shows the uneasy application of theory in practice as well the need to interrogate which forms of change from planning are actually acceptable.

Beyond the matrix

Compensation is discussed in planning beyond the matrix of values and site as well. Rönn (2020) expands the ambit of possible compensation measures, while remaining within the detailed planning process. Based on his findings, he characterises compensation as a range of actions: historic environment investigations, plan revisions and historic environment descriptions, design interventions, plan regulations, and professional consultation (Rönn, 2020: 135-137). Compensation is thus very broad and comprises actions that are not necessarily physical measures related to the buildings or objects of value, and the sites of loss. For Rönn (2020: 113) compensation "leads to revisions of the detailed

development plan proposals, new plan regulations or changed design of the new buildings". It is triggered by change and trade-offs which happen through negotiations between actors in the planning process.

One example is a new residential area planned in the historic environment of the island of Styrsö in Gothenburg. This is a designated national interest area with various agricultural and coastal parcels from the Stone Age to contemporary times (Rönn, 2020: 119). Following the plan for the new project, there was a negotiation between the municipality and the County Administrative Board. The latter raised the need for the new design to be in harmony with the historic environment (Rönn, 2020: 121). According to Rönn (2020: 122-123), compensation played out in the form of historic environment assessments and investigations. These measures pushed the new project to be more sensitive to the historic environment. Further, compensation was also seen in specific design requirements for the new project in terms of materials, colour, balcony design, and related architectural elements.

Similarly, in the case of new housing in a historical park from the 1930s in Gothenburg, there was back and forth between the municipality and the County, resulting in compensation through the architectural design of the new project (Rönn, 2020: 126). Here too, apart from investigation and reports on the historic environment, architectural measures included smaller design volumes, suitable detailed design for elements like roofs and balconies, and appropriate façade treatments and colour selection (Rönn, 2020: 126).

Compensation, as described above, is about enriching the new project with historic elements and pushing for improvements to its design. It is less engaged in adding to or bringing out aspects of the historic environment itself. Compensation is further about making it possible for the new project to proceed. As Rönn (2020: 133) writes, the intent of compensation is to implement the detailed plan.

There are other cases where conservation actions and thinking are actively linked to the concept of compensation or characterised as an exploration of it. These, while few, come from planning in broader terms, i.e., outside detailed planning. They are seen in the work of Teräväinen (2020) and Nilsson (2020; 2022). Teräväiinen (2020) looks at the Finnish context of compensation in planning. In this case, compensation in response to urban development projects can be expressed through historically sensitive renovations and adaptive reuse (Teräväinen, 2020: 157-158; 163-164). Nilsson (2020; 2022) sees compensation through new design that is responsive to its historic context and conveys the area's history. Here, new architectural works engage in storytelling and interpretation of history (Nilsson, 2020; 2022). Examples include integrating historic roads in the

new plan, working with materials that convey history, and introducing signage and new art works (Nilsson, 2022). In his interpretation, even a replica of a historic building can be compensation (Nilsson, 2020: 212). This type of compensation goes beyond individual buildings to the scale of larger urban plans.

Beyond planning

Some authors connect compensation to broader concepts outside physical planning measures. Compensation thinking here derives from various sources. For Kouzelis (2022), the open-air archaeological museum can help develop compensatory approaches, since it is a source of historical knowledge through material record. Compensation can also mine vernacular knowledge for innovative responses to resource-scarcity (Kouzelis, 2020). For Davies and Standal (2022), resource management in the context of coastal Norway can be compensation. Bortolotto et al. (2022) consider compensation for loss of intangible elements of the landscape, triggered by economic development that promotes tourism. Compensation in the face of these socio-economic processes can take the form of support for local practices such as farming, improving biodiversity, and more (Bortolotto et al., 2022: 169).

Some work further emphasises social values as being at the centre of compensation. For Kirkegaard (2020), compensation needs to be embedded in the social aspects of historic environments. This involves thinking of historic environments beyond their materiality and compensation as a matter of "everyday life" (Kirkegaard, 2020: 71). Compensation can result in an experience or an added value, such as collective identity (Kirkegaard, 2020: 75). And Davies (2020) too puts the social aspect of compensation at the centre, by looking at community needs and developing local narratives of a place.

The works mentioned in this final section are valid conceptual excursions into compensation thinking, but have not been explored further because they are removed from planning practice.

Overall, this chapter shows that historic environment compensation is an evolving concept. It is open to interpretation, and involves characterisation of various actions and concepts as compensation. Some of these are heavily focused on the modalities of certain formal planning processes which can be restrictive. They further borrow compensation tools as available in law and policy, which, at times, conflate values and site, and are generally inadequate to fully capture historic environment compensation. Characterisations of compensation outside planning

are fairly exploratory and conceptual. In summary, compensation in theory is still inchoate.

Chapter 7: Responses to historic environment loss

As previous chapters show, Swedish law and policy are geared towards compensation for loss of natural values of environments. And theory on compensation for historic environment loss is inadequate. Further, there are few precedents for compensation in practice. Nevertheless, attempts are being made to compensate for historic environment loss. This chapter studies what such compensation can look like by mapping out the range of responses to historic environment loss in the two cases, the West Link and the Mumbai Metro. This helps to understand compensation in relation to other conservation responses.

The chapter is divided into six sections. The first section develops a tool for analysing the findings in the two cases. The remaining five sections analyse the responses in each case using the analytical tool developed.

Developing an analytical tool for sorting the actions

The process of negotiation over the historic environment in the two cases yields various actions. "Actions" are defined as physical measures, whether proposed or underway. They are further grouped together and interpreted as "responses", or conceptual categories based on their intentions. The development of an analytical tool helps in studying the actions and responses.

The tool is arrived at in this section through two sub-sections. The first sub-section analyses the Swedish Transport Administration's (STA) hierarchy of conservation responses. The second sub-section builds on that to develop an analytical tool suitable for analysing both the cases.

Swedish Transport Administration's hierarchy

The Swedish Transport Administration's (STA) hierarchy of responses is the starting point for analysing the various official responses in the two cases. In increasing order of preference, the hierarchy states:

> "1. As far as possible avoid damage and limit encroachment on the existing cultural environment
>
> 2. Minimise the damage when intrusion cannot be avoided
>
> 3. Restore areas around the stations and the sections built through open shafts in a way that strengthens the cultural environment
>
> 4. If possible, make visible, incorporate, or otherwise visualise the relevant ancient remains at the stations, at open shafts or alternative locations
>
> 5. Place and design weather-protected stairwells within the station areas so that their designs interact with the cultural environment on site" (STA, 2016: 20, author's translation)

The first two responses deal with material preservation (STA, 2016a: 20). The third response refers to restoring historic environments, including parks and trees to their former conditions to the extent possible (STA, 2016a: 20). The fourth response deals with making the excavated ancient remains visible through actions like exhibitions and information (STA, 2016a: 20). The STA (2016a: 20) mentions a hierarchical order for the first four options, i.e., avoid, minimise, restore, and make visible. It does not provide a description of the fifth response.

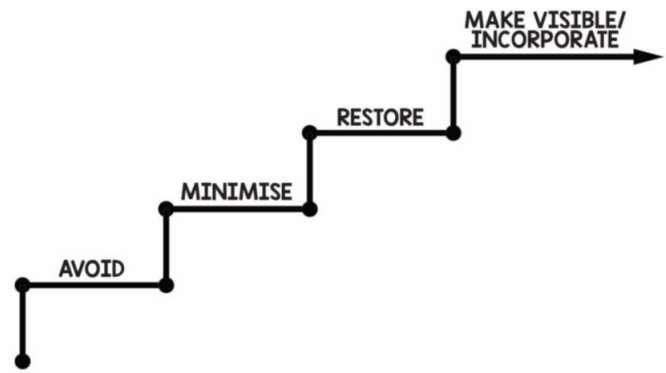

Figure 15: Pictorial depiction of the STA's hierarchy

Diagram: Maitri Dore (2023)

The hierarchy, depicted in Figure 15, goes from least to most change-oriented, where change connotes physical loss of historic objects or environments. The first two responses focus on the material loss itself, which is perceived as negative, i.e., as damage. The responses are therefore damage mitigating responses. With the fourth response, the focus moves away from historic environment damage to

working with the ancient remains. This involves making them visible or incorporating them into the new project in some way. The restore response has elements of both damage mitigation and historic environment focus, and bridges the two. It focuses on the historic environment in that it involves returning it to its previous state, however, it does not involve changing it or introducing new elements.

Analytical tool

The analytical tool developed here adopts the first three responses in the STA's hierarchy, i.e., avoid, minimise, and restore. It clubs the fourth and fifth responses into one category and further expands the range of responses by adding two more. The development of the responses in the tool is based on interpretation of the actions and not necessarily on the actors' claims about them. The six responses are shown in Figure 16.

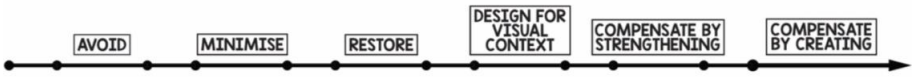

Figure 16: Analytical tool developed

Diagram: Maitri Dore (2023)

The first three responses, i.e., *avoid*, *minimise*, and *restore*, are defined based on the STA's (2016a: 20) definitions. They are equivalent to actions that aim to avoid or minimise physical loss of the historic environment, or physically restore it to its previous condition, respectively. The response of restore covers the restoration of not only historic objects and environments but also of trees and green areas, insofar as they are restored for their historic environment values.[3] The fourth and fifth responses in the STA's hierarchy collectively concern actions that add to, incorporate, or in some way bring the historic environment into focus. They are therefore clubbed together as one response category, namely compensate-by-strengthening.

Compensate-by-strengthening comprises the terms "compensation" and "strengthening", words used in the West Link but without strict definitions. The P3 ruling mentions the need for compensation for the impact of the West Link,

[3] Trees are assessed for their natural values as well and there is therefore a different, dedicated hierarchy of responses for dealing with trees that considered both sets of values (STA, 2015: 9; 2016b: 14).

and both P3 and the Implementation Agreement mention strengthening of historic environment values. Official action plans from both the STA and City Museum refer to strengthening without defining it (STA, 2023; City Museum, 2017; City Museum, 2018). The STA (2021a) also mentions strengthening in their broader compensation policy. The actors refer to compensation and strengthening too, but loosely and inconsistently, and interpret their meanings in the context of their work. The STA prefers to use strengthening (Interviewee 1a, STA, 2020a). The City's historic environment group uses the two terms interchangeably and are more concerned with the outcomes than the word used (Interviewee 7a, CHEG, 2021).

While there are no clear definitions of compensation and strengthening, the terms carry an air of additivity or creativity. In the case of compensation, this is seen in law and policy, and theory, wherein compensation involves the re-creation of values. In the case of strengthening, the STA uses the term as part of the gamut of "value-added or creative measures" (STA, 2016a: 24, author's translation). They offer a range of possibilities for what strengthening could be, such as integration of architectural design/art in the project, exhibitions, signage, and guided tours to convey the story of the city, incorporation and highlighting of the former fortifications, creation of new recreational areas, and so on (STA, 2016a: 24-25). Borrowing from the spirit of these notions of compensation and strengthening, the response category of compensate-by-strengthening is defined by certain types of additive or creative actions at the scale of the excavation sites and/or station buildings.

The analytical tool is further expanded based on the actions found in the two cases that merit new response categories. These are:

- Design-for-visual-context
- Compensate-by-creating

Design-for-visual-context covers the introduction of new built structures that are primarily focused on the aesthetics of the surrounding historic environment. The new designs are aimed at visually blending into the surroundings or being inconspicuous, so that the historic environment can take centre-stage. Since this response involves respecting the status quo and is more about visual than physical integration, it is placed between the responses of restore and compensate-by-strengthening.

Compensate-by-creating covers additive actions at the urban scale and the creation of new urban spaces. This response is larger in scale and scope than compensate-by-strengthening. It involves wider geographical areas, more permanent actions,

and/or new functions. The category is therefore placed after compensation-by-strengthening.

The analytical tool developed based on the actions in the cases, from least to most change-oriented looks like this:

- Avoid damage
- Minimise damage
- Restore historic environment
- Design-for-visual-context
- Compensate-by-strengthening
- Compensate-by-creating

The fourth, fifth, and sixth response categories all cover additive actions, however these differ in the nature and/or extent of additivity. The analytical tool does not presuppose or prescribe a hierarchy within the responses.

The responses collectively cover the entire range of actions that emerge in both the West Link and Mumbai Metro cases. The West Link shows all six responses on the analytical tool. The analysis in the thesis, however, focuses on the last two, i.e., compensate-by-strengthening and compensate-by-creating. The first of these is mostly present in the STA's proposed actions, and the second, in those of the City's historic environment group. In the case of compensate-by-creating, the actions are not all intended as responses to the West Link alone.

The Mumbai Metro shows the first four responses, i.e., avoid, minimise, restore, and design-for-visual-context, and to a limited extent the fifth, compensate-by-strengthening. The analysis in the thesis focuses on avoid, minimise, and design-for-visual-context.

The analytical tool is the framework for the analysis in the rest of this chapter. The responses of avoid and minimise are analysed together under avoid-and-minimise since they both have the same aim, i.e., damage mitigation. The cases are analysed individually in each sub-section. The last section, compensate-by-creating, only deals with the West Link, as this response is absent in the Mumbai Metro.

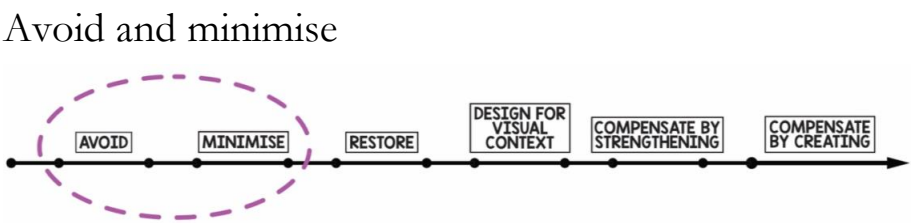

Figure 17: Avoid-and-minimise response

Diagram: Maitri Dore (2023)

West Link

In the early stages of the project, the STA deployed the avoid-and-minimise response in the realignment of the track. The West Link had originally been planned to run closer to the Göta River, outside the northern boundary of the former fortifications, potentially posing greater risk to the underground remains (STA, 2012). In 2006, following a request from the National Heritage Board, the STA explored three alternatives, and decided in 2007 that the current one was most suitable (STA, 2016a: 9). For the City's historic environment group, the selected option was the second least preferred of the three options prepared by the STA in the 2006 investigation (Interviewee 7a, CHEG, 2021; Interviewee 8a, CHEG, 2021).

The realignment of the track is also at times spoken of as compensation (Interviewee 1a, STA, 2020a), even though it came before the STA's legal mandate to compensate. Regardless of the terminology, according to the STA, moving it in the plan was an action to minimise damage to the historic environment (Interviewee 2a, STA, 2020), and where they do cause damage to it, they manage to keep it to the minimum (Interviewee 2a, STA, 2020). Other actions also fall within the category of minimising damage. These include replacing the parallel tunnel on the southern riverbank with rescue shafts so as to affect the fortification remains as little as possible, and designing the Central and Haga Stations, the Kvarnberg shaft, and temporary areas so as to cause least possible intrusion to the ancient remains (STA, 2023: 5).

The STA also seeks to avoid and minimise damage through their action programme which assesses the sensitivity and impact of the project on the historic environment; and the control programme that proposes actions to deal with the impacts (STA, 2016a: 14; 23-24). These actions include dealing with settlement of soil and vibrations resulting from blasting, piling, and excavation; groundwater

seepage damaging wooden piles and rust beds; and compaction of different historic environment layers due to heavy traffic (2016b: 14).

Although avoiding damage is preferable to minimising it, the reverse was selected in the area around the Skansen Lejonet tower. As Interviewee 1a (STA, 2020a) states, they could have designed the track to be above ground and at a 50m distance from the tower, in effect, avoiding damage to it. The track is now, however underground, and close to the tower, which means it burrows through ancient remains. This choice causes more physical loss to the historic environment. However, as Interviewee 1a (STA, 2020a) explains, it enables the area around the tower to be developed as a public space rather than be reduced to a wedge between railway lines and highways.

Mumbai Metro

The avoid-and-minimise response is seen in actions proposed and taken by the Metro Rail Company, as well as those that emerge through negotiation with the Heritage Committee.

The Metro Rail Company discusses avoiding historic environments in terms of the alignment of the track. They state that the alignment was selected "to minimise the land disturbance to avoid archaeological sites", among others, and that "cultural heritage" is "[a]voided by adjustment of alignment" (Maple and MMRCL, 2020: 401). They further mention that the presence of "heritage buildings" was one reason why the underground alignment was the "only viable option" (Rites and MMRCL, 2011: 4-76).

Avoiding damage is also briefly discussed with respect to the construction of a minor depot on the Mahalaxmi Racecourse. The racecourse is a 225-acre swathe of land (Piramal Mahalaxmi, 2023), less than a kilometre from the metro tunnel (Rites and MMRCL, 2011: 7-15). The Metro Rail Company considered it as an option for the depot construction however dismissed it, because the "heritage" status of the grandstand would require "additional clearances" (Rites and MMRCL, 2011: 7-15; Maple and MMRCL, 2020: 79). The "heritage" status would also pose issues for constructing the depot and related built elements overground (Rites and MMRCL, 2011: 7-15). Eventually, they deemed the plot unsuitable and selected an alternative for both the main and minor depots (Rites and MMRCL, 2011: 7-20).

To minimise damage, the Metro Rail Company prepared various surveys, assessments, and plans. The condition survey of buildings ("heritage" or otherwise) in the vicinity assessed the physical condition of each building by visual

inspection and "existing signs of distress such as cracks, spalling, wall bulging, missing bricks, exposed rebars, deteriorating timber elements" (Rites and MMRCL, 2011: 4-77). It identified the potential impact on buildings during construction and operation of the metro (Maple and MMRCL, 2020: 15-16). The management plan would deal with the identified impacts by way of "preserv[ing] the structures" (Maple and MMRCL, 2020: 16; 321). The Metro Rail Company mentions that they would also monitor structural vibrations during construction and operation of the metro (Maple and MMRCL, 2020: 16; 321).

The Metro Rail Company lays great emphasis on avoiding and managing vibrations of historic buildings, before, during and after construction (Maple and MMRCL, 2020: 324; 60; Maple and MMRCL, 2020: 16). They acknowledge that historic buildings are additionally susceptible to the impacts of vibrations, and that studying these impacts is important (Maple and MMRCL, 2020: 359; 242). They use the Tunnel Boring Machine to avoid and minimise impacts from vibration, referring to it as a "state of the art technology", that "gives negligible vibration and does not affect the surrounding structure" (Maples and MMRCL, 2020: 321). They studied six "most sensitive" spots on the line for vibration impact, including the 125-year-old CST railway terminus (Maple and MMRCL, 2020: 179-90). As a Metro Rail Company representative, asserts, the construction technology is responsive to the structural safety of "heritage buildings" and their decorative elements:

> "[T]hey need to be kept safe during construction. So, our construction methodology was defined by that. In heritage area, we couldn't do complete cut-and-cover, we had to do [New Austrian Tunneling Method] plus cut-and-cover. Then we had certain restrictions on how much vibrations are allowed, how much is the speed of the [Tunnel Boring Machine] […] allowed. Because […] it should not affect the health of the building or it should not impact it negatively. So, all those restrictions were put and they were obviously adhered to and this is how the heritage issues were tackled in [the Mumbai Metro] project." (Interviewee 9b, Metro Rail Company, 2022)

The quote makes clear the project's emphasis on the preservation of buildings and their architectural elements.

The avoid-and-minimise response shines through most visibly in the negotiations between the Metro Rail Company/Regional Development Authority and the Heritage Committee. The committee's foremost demand was that the metro track be realigned so as not to pass under DN Road, which is the stretch between the upcoming Hutatma Chowk and CST metro stations, to ensure "least

intervention in the heritage buildings/precincts" (MHCC meeting minutes, 8 November 2013). They also asked for the Hutatma Chowk Station to be scrapped (Interviewee 17b, Heritage Committee, 2023).

One of the issues raised with the alignment under DN Road was the cut-and-cover construction technique. According to the Heritage Committee, the technique would damage the building structures above since the buildings are very close to the road (MHCC meeting minutes, 8 November 2013). Additionally, this technique would pose a problem to the buildings' shallow foundations getting unsettled during construction (MHCC meeting minutes 8 November 2013). In demands aimed at damage minimisation, the committee asked the Regional Development Authority for information on the foundations "so that necessary precautionary measure[s] [could] be taken" (MHCC meeting minutes, 8 November 2013). They further demanded a "conservation strategy for preventive measures of the existing heritage structures" and a "proper strutting / propping plan to ensure safety around the area […] after studying each and every building on D.N. Road" (MHCC meeting minutes, 8 November 2013).

The discussion around the realignment under DN Road was a running theme in the Heritage Committee meetings. The Heritage Committee's demands calling for avoiding damage, by way of realignment of the track, were countered by the metro developers' assurances of minimising it. The Regional Development Authority stated that they would maintain a 4m distance from the building front facades as a safety buffer (MHCC meeting minutes, 8 November 2013) and also asserted that the alignment was "almost frozen" (MHCC meeting minutes, 26 November 2013). The Heritage Committee, however, strongly objected to this and were "of the opinion that an open minded approach would serve better in the interest of the consideration of the proposal from heritage conservation point of view" (MHCC meeting minutes, 26 November 2013). In the following meeting the Regional Development Authority presented two alternative options for the alignment, both avoiding going under DN Road, while also stating that the third option – under DN Road – was their most preferred (MHCC meeting minutes 8 January 2014). The committee stood their ground and raised the demand for realignment again stating that this was "imperative from heritage point of view" (MHCC meeting minutes, 8 January 2014). Demands geared towards damage avoidance and minimisation, either directly or indirectly, are seen in four of the five recommendations listed in the minutes of a following meeting (MHCC meeting minutes, 15 February 2014). These four are:

- Realignment of the track from under DN Road

- No provision of additional Floor Space Index (FSI) in "heritage" areas because that would be "a motivation for heritage structures to be run down and be irrevocably damaged"
- Accurate drawings showing locations of metro facilities in relation to "heritage buildings"
- Setting up of a monitoring mechanism within the Regional Development Authority that would work with "heritage" issues and periodically communicate with the Heritage Committee, including appointment of an independent structural consultant

Of the demands, the metro developers, as represented by the Regional Development Authority commissioner, accepted all but the realignment option (MHCC meeting minutes, 15 February 2014).

They stated their intention to reexamine the proposal (MHCC meeting minutes, 15 February 2014), but in a following meeting, reported that the commissioner did not find the proposal feasible (MHCC meeting minutes, 26 August 2014). The Metro Rail Company reasoned that realignment of the track would exclude "several important catchment areas" and hamper "smooth intermodal connectivity" (MHCC meeting minutes, 26 August 2014). They further stated that shifting the tunnel to the parallel road was impossible due to the "narrow road widths and the infringement of the heritage building foundations" of that road (MHCC meeting minutes, 26 August 2014). The Metro Rail Company further listed proposed actions to directly or indirectly minimise damage:

> "i) [The Metro Rail Company] will take all measures to ensure that the heritage buildings are not affected in any manner.
>
> ii) Special provisions for continuous monitoring of the Heritage Structures are already included in the tender documents for contractors.
>
> iii) [The Metro Rail Company] will set up a mechanism to keep the [Heritage Committee] abreast with all activities surrounding heritage structures" (MHCC meeting minutes, 26 August 2014)

Nevertheless, the Heritage Committee persisted in their demands for damage avoidance through realignment, whilst also proposing further damage minimisation actions. They said that if the Metro Rail Company insisted on the same alignment, it would need to be without the open cutting construction method along the DN Road stretch (MHCC meeting minutes, 26 August 2014). This demand did not come to pass. Eventually the Municipal Commissioner of the

Municipality overruled the recommendations on realignment, as recorded in a later meeting (MHCC meeting minutes, 7 April 2015).

Apart from the discussion on realignment, the avoid-and-minimise response is reflected in the production or demands for various plans and assessments of "heritage buildings" more generally. The Heritage Committee demanded a building condition survey, fabric status, and conservation strategy for the individual "heritage buildings" that they deemed affected by the metro line, and also a "preservation/restoration strategy" from the Regional Development Authority (MHCC meeting minutes, 8 November 2013). They also demanded that the Regional Development Authority submit a map of "heritage buildings", "heritage precincts", and Grade I buildings/sites with their 100m radii (MHCC meeting minutes, 8 November 2013). This demand was likely to confirm where the metro physically intersected with these historic environments. There was also the production of structural vulnerability and heritage vulnerability assessments for "heritage buildings" in the vicinity of the project, as confirmed by Interviewee 26b (architect, 2023). The heritage vulnerability assessment inventoried the architectural elements of "heritage buildings", such as the stained glass, furniture, and finials and assesses the impact of the metro on them (Interviewee 26b, architect, 2023). The outcomes of the assessments informed the corresponding action in the form of a conservation plan, which detailed out how to protect the "heritage buildings" from damage, through actions such as scaffolding, support, and protection plans (Interviewee 26b, architect, 2023).

Restore

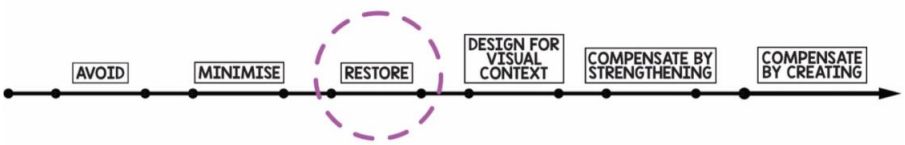

Figure 18: Restore response

Diagram: Maitri Dore (2023)

West Link

The STA will restore the areas under construction to their previous functional conditions in consultation with the City of Gothenburg (Interviewee 1a, STA, 2023b). For the green areas in general, the STA draws up restorations plans for

each in collaboration with the City of Gothenburg (STA, 2015: 9; STA, 2016c: 4). These restoration plans have their starting points in the detailed plans that the City develops (STA, 2016c: 16). The restoration of land in this section is discussed in relation to actions around the Skansen Lejonet tower, and of trees, in the Kungsparken green area.

At Skansen Lejonet, one of the actions is to restore the land to its former state even though excavations have led to the discovery of finds. On the eastern side, the excavations have revealed a 16th century tower containing items like a sundial and beer kegs (STA, 2023: 11). On the western side, the findings include the foundations of what is presumed to be a 19th century artillery house, an entrance to the old fortifications (STA, 2023: 11), and the remains of a small 17th century house (STA, 2023: 12). In an earlier proposed action, the STA had planned to construct a new walkway on the west that would enable access to the house remains and the entrance (STA, 2022: 13; STA, 2023: 12). The proposal for the walkway and highlighting the house remains have now been scrapped (STA, 2023: 13). This is in the interest of "re-creating a slope and minimising the visual impression of the cut" (STA, 2013: 13, author's translation). The found remains of built structures on both eastern and western sides will be covered up again (Interviewee 1a, STA, 2023b) and the STA (2023: 14) is working on designing the tunnel so that the hill and tower are not visually affected.

At the Kungsparken green area in Haga, the STA is working with restoration of trees as one of its actions. This area is also an officially designated historic environment. Its trees have not only biological but also cultural or historical values. Interviewee 12a (CHEG, 2022) emphasises these values when they refer to encroaching on as little of the park as possible, reducing the intrusion of the project, and placing new buildings in a way that avoids interfering with views and sightlines, so as to preserve the historical layout of the park. The STA has temporarily moved 52 linden trees to make way for construction of the West Link and will move them back after construction (STA, 2023: 43). The STA does not, however, expand on trees and their restoration in their action plan because this work is part of another process for fulfilling a different legal mandate (STA, 2023: 5).

Mumbai Metro

Restoration is mentioned in the context of "heritage buildings", in the Heritage Committee's demand for a "Preservation/Restoration strategy for all perceived

damage to heritage buildings/heritage precincts" (MHCC meeting minutes, 8 November 2013). At a larger scale, the Metro Rail Company will restore the land back in its areas of working and is also collaborating with other authorities to introduce other transport facilities around the metro stations (Interviewee 10b, Metro Rail Company, 2023).

The Metro Rail Company also plans to restore some of the green areas, as in the Colaba Woods garden (MHCC meeting minutes, 8 November 2013) as well as replant trees and plant new individual ones (Interviewee 18b, Tree Authority, 2022). In the case of trees however, actions are targeted at restoring natural values rather than cultural ones, however the latter are understood. Interviewee 18b (Tree Authority, 2023) refers to the approach of another member of the Garden Department of the Municipality in favourable terms:

> "[The member of the Garden Department] doesn't want to see […] yellow flowers, or the pink colour flowers, or the blue colour flowers of the fikus. [They are] interested to have a lot of oxygen, a tree which will give a lot of oxygen in the air, and which will improve our ecology, and […] the percentage of ecology where it has been lost, we are losing it because of developmental projects, that could be compensated as early as possible, so that the temperature will remain cool all the time." (Interviewee 18b, Tree Authority, 2022)

The interviewee refers to the focus on colours as "beautification" and compensation in terms of countering "ecological loss" (Interviewee 18b, Tree Authority, 2022). Trees are thus seen to be important for their natural, rather than cultural values.

Design for visual context

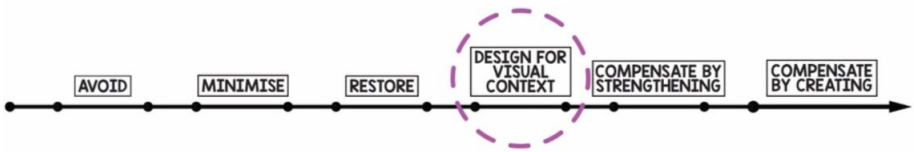

Figure 19: Design-for-visual-context response

Diagram: Maitri Dore (2023)

West Link

This action is seen with the service shaft at Kvarnberget. Both the STA and the City's historic environment group acknowledge the intention, with the design, to respect the surrounding historic environment through design and material.

Natural stone is the material of choice (STA, 2023: 29) and the finishes take the look of the high stone wall behind (Interviewee 1a, STA, 2023b). The intention is to re-create the look of the former fortifications in a contemporary way (Interviewee 3a, STA, 2022). Interviewee 4a (architect, 2022) too states that the form and location of the new built elements intend to "[respect] the original fabric of the city wall". For the City Museum (2017: 26) as well, the location, height, volume, and texture can be leveraged to re-create those of the former wall.

While there were earlier intentions to make this site a more significant part of the work with the historic environment, that is no longer the case (Interviewee 1a, STA, 2023b; Interviewee 4, architect, 2022). It is not an "obvious expression" of the historic environment anymore (Interviewee 4a, architect, 2022). Nevertheless, the STA plans to make the finds excavated in this area available to the City for use in further design (STA, 2023: 29).

Mumbai Metro

The design of the overground structures in "heritage areas" is important to both the Heritage Committee and the metro developers. The Heritage Committee demanded that the Regional Development Authority get approval from the committee for the location and design of each proposed entry/exit structure and station building (MHCC meeting minutes, 15 February 2014). And in an early meeting, the Metro Rail Company referenced stations in other parts of the world whose entrance designs "[suit] and [blend] with the heritage character of the surrounding" (MHCC meeting minutes, 8 January 2014). The two parties have largely discussed actions in connection with the design of Hutatma Chowk Station at the southern end of DN Road.

The thrust of the response was to locate and design Hutatma Chowk Station so as to avoid, what both the parties consider, visual interferences. Four actions within this response are discussed here: relocation of the underground station building, design of the overground built elements, their location, and their material and finishes.

The *first* action was the proposed relocation of the underground station building. The architects consulting on the project proposed the relocation

"keeping in mind the significance of the Flora Fountain structure and to maintain its visual connect while travelling along the DN Road" (MHCC meeting minutes, 31 July 2018). The reason for the suggestion was to have a pedestrian quality around the Hutatma Chowk plaza (Interviewee 26b, architect, 2023). The move eventually did not come to pass because of bureaucratic procedures related to the Traffic and Roads department (Interviewee 26b, architect, 2023).

The *second* action attempted to keep the majority of building elements of the station below ground. The discussion related to overground structures such as entries and exits. The issue of keeping the overground station structures to a minimum was first brought up in 2014 with the discussion being about roofless entries and exits for stations, in what was called, the "Heritage Influence Area" (MHCC meeting minutes, 8 January 2014). Hutatma Chowk Station is one of these stations. In this meeting, the Heritage Committee said it was unacceptable for rainwater to enter the stations and the Regional Development Authority too preferred covered stations in the interest of saving costs on mechanical pumping (MHCC meeting minutes, 8 January 2014). The discussion reemerged in 2018, when the consultant architects proposed staircases and escalators without roofs projecting from the ground surface, entailing the need to mechanically pump out rainwater during the monsoons (MHCC meeting minutes, 31 July 2018). The Heritage Committee again said that rain protection should be considered (MHCC meeting minutes, 31 July 2018). And the architects persisted in their opinion that roofless entrances and exits were preferable:

> "Regarding rain protection at entrances, even a temporary structure will obstruct the sight lines and hence should be resisted. Necessary provisions for flood protection and the requisite sump capacities are incorporated in the design and it has been decided to stay with the idea of open to sky" (MHCC meeting minutes, 31 October 2018)

The decision finally made was for the staircases and escalators to be roofless (Interviewee 10b, Metro Rail Company, 2022; Interviewee 26b, architect, 2023). Rain protection will be built into the design, for example, by way of staircase railings that act as flood barriers (Interviewee 26b, architect, 2023). As for other overground structures, as per the current design, the station has only three overground structures: lift shafts, a police kiosk (relocated from its existing spot on the site), and a firefighting shaft (Interviewee 26b, architect, 2023).

The *third* action was the proposal for the relocation of four lift shafts at one of the DN Road junctions. The Heritage Committee proposed moving them as the shafts would be "within the visual axis of DN Road and [could] hinder the visibility

of some of the heritage buildings to some extent" (MHCC meeting minutes, 31 July 2018). They proposed these shafts to be moved to inner roads "to reduce the visual intervention on DN Road" (MHCC meeting minutes, 31 July 2018). The Metro Rail Company and their consultants deemed this impossible due to the limited space available for construction on the pavements of the inner roads, as well as additional travel distance for metro users in this case (MHCC meeting minutes, 31 July 2018). They also assured the Heritage Committee that pedestrian movement in the DN Road arcade would not be obstructed (MHCC meeting minutes, 31 July 2018). The architects consulting on the overground structures also cited safety reasons for choosing the location of the lift shafts (MHCC meeting minutes, 31 October 2018). Eventually, the lift shafts were not relocated but dealt with through material choices.

The *fourth* action revolves around design and material choices of the overground structures, discussed here both generally and with specific focus on the police kiosk and lift shafts. The importance of design and material choices has been brought up by the Heritage Committee (MHCC meeting minutes, 8 November 2013) as well as the Metro Rail Company, who emphasise the need for the overground built elements to be "in tune" with the surrounding historic environment (Interviewee 9b, Metro Rail Company, 2022).

Through discussions, two actions emerged that aim to respond to the aesthetics of the surroundings. One was the attempt to match the materials of the overground structures with the surrounding "heritage buildings", and the second, to invisibilise them completely. Interviewee 9b (Metro Rail Company, 2022) encapsulates the two actions with respect to Hutatma Chowk Station:

> "[…] either we should have the structures which gel well with the surrounding heritage buildings or they should be made of glass. So that they are transparent and they enhance the beauty of the surrounding heritage structures. So, […] mainly […] the structures which were approved were of glass and wherever some non-glass element is to be used, that has to be in conjunction or exactly as per the designs of the surroundings building, the similar kind of stone to be used." (Interviewee 9b, Metro Rail Company, 2022).

These two stylistic architectural options were a running theme in the Heritage Committee meeting discussions. In an early meeting, the Regional Development Authority and their consultants presented two design proposals for the entry/exit structures of Hutatma Chowk Station, as well as others that fall in "heritage precincts". One proposal was for glass and the other, an "art deco styled

alternative" (MHCC meeting minutes, 26 November 2013). The Heritage Committee did not find either alternative be "in harmony with the surrounding heritage structures" (MHCC meeting minutes, 26 November 2013). They stated that the glass alternative was unsuitable, and the art deco styled one would perhaps not be possible due to space limitations (MHCC meeting minutes, 26 November 2013). As the designs developed, later proposals from the architects working on behalf of the Metro Rail Company included:

- Cast iron railing on a Malad stone clad base wall
- Three roof options – open, covered (flat), and covered (curved)
- Covered options in acrylic, steel, glass, or polycarbonate
- Lift/staircase block options either clad in Malad or black basalt stone or constructed of glass and steel (MHCC meeting minutes, 8 January 2014)

Malad stone is a yellow basalt stone and was used as building material in many of the "heritage buildings" in the area, including in the façade of the CST railway terminus. For one of the other metro stations under discussion, a curvilinear glass roof structure and stucco cladding for entry and exit structures was proposed by the architects (MHCC meeting minutes, 8 January 2014; Abha Narain Lambah and Associates, 2013).

In later discussions, the designs were fleshed out further, even as the overall alternatives to having two stylistic architectural options for design and materials of the overground structures endured. In a much later meeting, the architects consulting on the overground built elements proposed a plinth and parapet in grey basalt or precast greyish stone crete panel with an off-white plinth band, and railings and street furniture according to the existing DN Road guidelines (Narain Lambah and MMR-HCS[4], 2002) (MHCC meeting minutes, 31 July 2018). The architects also proposed that the overground built elements, such as the police kiosk and lift shafts, be in Malad stone or precast Malad crete panels (MHCC meeting minutes, 31 July 2018). To the Heritage Committee, the proposed finishes were "in consonance with heritage typology and the predominant character of D.N. Road" (MHCC meeting minutes, 31 July 2018). However, they said that glass should be used for both of these overground structures.

In the case of both the police kiosk and the lift shafts, the discussion again reflects the two options of material choices and design. The architects were in favour of finishes that resemble the surrounding buildings, and the Heritage

[4] MMR-HCS stands for the Mumbai Metropolitan Region – Heritage Conservation Society. It is involved in heritage research for the wider Mumbai region and had a limited role in the metro discussions.

Committee favoured what they considered contemporary materials. For the police kiosk, the committee advocated "reducing the mass of the structure by making use of more transparent and lighter materials than designing it in the period style" (MHCC meeting minutes, 31 July 2018). The architects, however, preferred a "period style":

> "[…] it is felt that period style would be more appropriate as any contemporary intervention would be incongruous and obtrusive to the heritage fabric." (MHCC meeting minutes, 31 October 2018)

Eventually, after suggestions and feedback, the committee approved the architects' proposals, which they described as "[reflecting] the architectural typology and colour scheme of heritage structures on D. N. Road" (MHCC meeting minutes, 24 July 2019). They further suggested the use of sand stone (in likeness to the nearby Commissariat building) and a sloping roof "to match with the surrounding" (MHCC meeting minutes, 24 July 2019). The discussions on the material are still ongoing, however, the intention to respond to the Commissariat building through material choice is still part of the approach (Interviewee 26b, architect, 2023).

The two stylistic options emerged in the discussions about lift shafts as well. As with the police kiosk, the Heritage Committee favoured the glass option:

> "The Committee opined that the design and materials for the new interventions should be distinctively different and contemporary to distinguish between the old heritage buildings and the new intervention. The Committee preferred the second option of a glass superstructure as it is modern and also transparent thereby reducing the visual mass. It was also suggested to reduce the height of the lift structures as much as possible with the use of hydraulic lift system to ensure that no mechanical components are visible." (MHCC meeting minutes, 31 July 2018)

They suggested the hydraulic option in the interest of maintain sightlines (Interviewee 26b, architect, 2023), but as later discussions indicate, hydraulic lifts were considered unsuitable (MHCC meeting minutes, 31 October 2018). The Heritage Committee reiterated their view on the use of contemporary materials. They also mentioned the need for the new structures to stand apart from the surrounding ones:

> "Regarding the lift shaft structure, the Committee reiterated its view that the design and materials for the new interventions should be distinctively different and contemporary to distinguish between the old heritage buildings and the new intervention. It was discussed that opaque / translucent glass

> may be used at places where mechanical parts of the lift could be visible." (MHCC meeting minutes, 31 October 2018)

The committee suggested glass, not only to give a lighter appearance, but also to stand apart from the historic environment (MHCC meeting minutes, 31 July 2019; 31 October 2018). Eventually, glass will be used for five of the lift shafts, and where they are at four-way junctions, will afford "corner visibility" and "transparency of the design" (Interviewee 26b, architect, 2023). The other lift shafts – on the inner roads or for fire safety – will be of reinforced cement concrete with Malad stone cladding (Interviewee 26b, architect, 2023).

Overall, as described above, four actions emerge through the negotiations that make up the design-for-visual-context response in the Mumbai Metro.

Compensate by strengthening

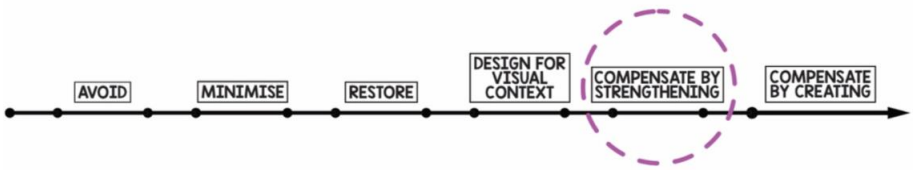

Figure 20: Compensate-by-strengthening response

Diagram: Maitri Dore (2023)

West Link

These actions are largely proposed by the STA who have the legal mandate to compensate. They are of two types: exposing found material and adding design elements.

Expose found material

The action with exposing found material is done either on-site, off-site, or as art.

On-site exposing is seen in the discussion on building remains found during excavations at Skansen Lejonet. During the excavations, several remains have been dug up on the hill, as seen in Figure 21. In one version of the proposed actions, there were plans to highlight the building remains found on both eastern and western sides of the hill (STA, 2022: 12-14; STA, 2023: 12-14).

Off-site exposing of material refers to displaying objects found during the excavations in the new stations. This action qualifies as being off-site because the

objects are moved from their found locations underground to new spatial contexts. This is seen in the display of finds in artefact boxes and temporary exhibitions at Haga and Korsvägen Stations, respectively (STA, 2023). Finds from the excavations include objects like pipes, pieces of porcelain, and coins (Abako Architects, 2021: 22, STA, 2023: 49).

Figure 21: Excavations at Skansen Lejonet

Source: Arkeologerna (2017)

To expose found material as art is to display and imbue it with new meaning, as in action with the stones at Central Station. Here, specific stones from the former fortification walls have been selected and refashioned as art in the station mezzanine, in project called "Konstlandskap" or "art landscape" (STA, 2023: 16). The former walls are meant to become a deconstructed work of art consisting of individual stone pieces (Interviewee 4a, architect, 2022). The stones are untreated, with the intention of inviting the viewer to come close to them and engage with their colour, shape, and texture (STA, 2023: 18). The art landscape is seen in Figure 22.

Figure 22: Art landscape at Central Station

Source: STA (2023: 20)

Add design elements

The second type of action involves the addition of design elements unrelated to found material. Some of these actions connect to the historical aspects of the place more directly, and other less so.

Direct actions are seen at Haga and Korsvägen Stations and the revised plans for Skansen Lejonet. At Haga and Korsvägen, there will be displays of historical maps and temporary exhibitions respectively (Abako Architects, 2021; STA, 2023). At Korsvägen station, the exhibition will display information to help understand life in a landeri or former historical agricultural property, with the possible display of videos and images (STA, 2023: 50). There were also ideas to use the temporary displays to showcase old botanicals prints that could also be artistically reinterpreted (Interview 4a, architect, 2022). At Skansen Lejonet, the remains will be covered up, but there will be some kind of markings on the ground and information on the history of the area (Interviewee 1a, STA, 2023b). Some of this information, newly discovered because of the excavations, confirms the presence of a mediaeval fortress from the 14th century, indicating the area's role as a stronghold even before the official birth of Gothenburg in 1621 (STA, 2023: 11).

Less direct actions are seen in some of the other proposals at Haga and Korsvägen Stations. At Haga Station, the proposed action, as seen in Figure 23, is to strew words like "bastion", "glacis", and "curtain wall" associated with the fortified city in the station's physical spaces. The words in the ground will not be obvious until one gets closer and not at first glance (Abako Architects, 2021: 10; STA, 2023: 37). They "can be found here and there in the station" and "be discovered afterwards and should not be too conspicuous" (Abako Architects,

2021: 11; STA, 2023: 35, author's translation). The chosen words are relatively unfamiliar, lending the quality of a "treasure hunt" to their discovery and learning (Interviewee 6a, architect, 2021). The aim is to create something that is "a little bit secret" and like a "riddle" to be solved (Interviewee 6a, architect, 2021).

At Korsvägen Station, the action involves engraving the names of landeri residents in the granite tiling of parts of the mezzanine (STA, 2023: 49). Contemporary reinterpretations of motifs on historical objects will also be engraved in the concrete around lift shafts and escalators (STA, 2023: 49). An earlier idea was to display information and graphics about the landeri on station skylights projecting out of the ground surface of the landeri park (STA, 2023: 47). The proposals for the graphics included botanical engravings of exotic plants from the time, including those that arrived through the East India trade (STA, 2023: 47).

Figure 23: Fortification-related words embedded in the flooring at Haga Station

Source: Abako Architects (2021: 26)

Other indirect actions are seen in some of the proposals for Central Station, the Rosenlundplats area in Haga, and two proposals that did not make the final selection for Haga Station. At Central Station, there is a proposal to mark the boundary of the former fortified city in the flooring (STA, 2023: 21). The historical marking in the mezzanine flooring will be based on a 1795 map of the city and the line marked will be that between the former moat and an earthen embankment (STA, 2022: 21). Accordingly, a change of flooring is marked at the land-water interface, with the former water area having a lighter colour of stone (STA, 2023:

24). This goes through the office spaces and the station's south-west exit (STA, 2023: 24). The STA is also collaborating with the City to reproduce this marking in the landscaping on the ground level (Interviewee 4a, architect, 2022). The plan is also to include signage and tie the story to that of the City's work on the ground level above (STA, 2023: 26). In the Rosenlundplats area, there is a similar action with adding a marking on the ground surface. Here, the STA (2023: 42), in dialogue with the City, proposes to mark the moat as it was in 1640 and part of the canal, where the West Link construction is underway.

Two proposals for Haga Station were not finally selected – they deal with fortification patterns and water patterns. The fortification patterns are of former rust beds, countersinks, and pile locks to be applied on different surfaces (Abako Architects, 2021: 5; STA, 2023: 34). The idea was to scatter them in different places in the station (Abako Architects, 2021: 7; STA, 2023: 35). Interviewee 6a (architect, 2021) refers to them as being "graphically interesting" to overlay on to different materials of the station. The water patterns were proposed for the walls and are considered as an art project rather than a building project (Interviewee 6a, architect, 2021). The patterns aimed to invoke association with the river, moat, and canal of the surrounding site (Abako Architects, 2021: 5; STA, 2023: 34).

Also at Skansen Lejonet and the Kungsparken green area in Haga, there are proposed actions for additional elements. Lamp posts and handrails at Skansen Lejonet will have an "old look" that respond to the surroundings and re-create how the area would have looked in the 17th century (Interviewee 5a, architect, 2021). At Kungsparken, the City's environment group proposes actions such as changing the material of the pathways from asphalt to gravel and introducing furniture, lamp posts, and fences that are reminiscent of the second half of the 1800s so as to re-create the former English garden (City Museum, 2014: 14-15). While these actions at Skansen Lejonet and Kungsparken do respond to the visual qualities of the surroundings, they are more within the compensate-by-strengthening response than the previous, design-for-visual-context one. This is because their thrust is on adding elements to create a new space, rather than receding into the background so that the existing historic environment can visually dominate.

Mumbai Metro

The Heritage Committee and the Metro Rail Company do not use either "compensate" or "strengthen", however some of their proposed actions can be

characterised as such. Two actions are discussed here: artwork and interior design at the stations that invoke its surrounding historic environment and local context, and the creation of an underground museum.

The *first* action, by way of artwork and interior design of individual stations, is discussed by the Metro Rail Company. A representative explains the proposal:

> "[…] the concept was, since it is passing through Mumbai's varied kind of pockets, while decorating the stations internally as part of the interior decoration, we can have various artworks […] or depict the theme through those artworks and through using certain design patterns, we could […] depict the theme of that area, the flavours of that area, that was the whole concept." (Interviewee 9b, Metro Rail Company, 2022)

This action involves incorporating cultural and historical aspects of the surroundings into individual station aesthetics. The interviewee cites the Dharavi area in central Mumbai and the Girgaon and Kalbadevi areas in south Mumbai as being potential starting points for the respective stations in those areas (Interviewee 9b, Metro Rail Company, 2022). Dharavi is a former fishing area, a contemporary site for a number of small-scale industries, and also infamous for being a vast slum settlement. The interviewee refers to its "popular and contemporary kind of culture" (Interviewee 9b, Metro Rail, Company, 2022). Girgaon and Kalbadevi are dense inner-city areas. The interviewee refers to their "very old Mumbai chawl culture" (Interviewee 9b, Metro Rail Company, 2022). Chawls are a particular typology of communal living from the 19th and early 20th centuries in Mumbai, when migrants from the hinterland moved to the city to work in its mills. The community environment of chawls spawned many cultural and political movements. The interviewee also refers to fisheries as a "core economic activity of Mumbai" and a concept that can be used for the station interiors of another area (Interviewee 9b, Metro Rail Company, 2022). The plan is to commission different kinds of artworks by local artists, once the structural works of the stations are completed (Interviewee 9b, Metro Rail Company, 2022). The proposed actions to incorporate elements associated with the city's fisherfolk – its first inhabitants – in Dharavi and Worli stations were also reported in the media (Venkatraman, 2017). In what can be interpreted as a reference to the southern stations of the Mumbai Metro, a Regional Development Authority also stated in a media report, that when it comes to station art in south Mumbai, the plan is to "[highlight] the city's heritage" (Rajeev, in Venkatraman, 2018).

The *second* action, the underground museum, was discussed very briefly, and as referenced by the architects working on behalf of the Metro Rail Company. The minutes of an early Heritage Committee meeting note:

> "It was informed that at Athens, the stone foundations walls falling in the Metro alignment underground place were kept intact and such spaces were converted into a museum." (MHCC meeting minutes, 8 January 2014).

While there are no project-specific proposals to this effect, this statement hints at potential aspirations or thinking in the direction of incorporating historic spaces with new ones. Eventually, the tunnelling method rendered retrieving potential foundations of the former fort walls and any other remains impossible (Interviewee 17b, Heritage Committee, 2021; Interviewee 9b, Metro Rail Company, 2022).

Compensate by creating

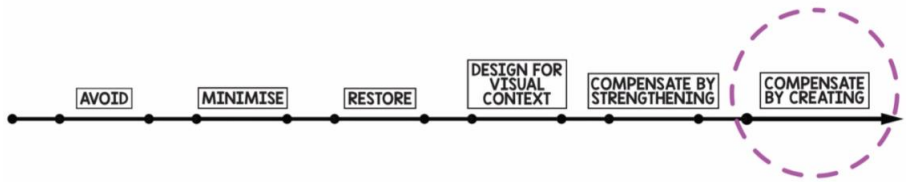

Figure 24: Compensate-by-creating response

Diagram: Maitri Dore (2023)

West Link

The actions lie in the realm of urban planning. They are mainly seen in the wider plans for the fortified city and the landeris, and to a smaller extent, in the actions in the Pustervikspl atsen area.

The *first* set of actions, proposed for the fortified city, as seen in Figure 25, are a walking trail, building the entrance portals of the former fortified city at their former location in a contemporary style, enabling access to historical city spaces, and a visitors' centre (City Museum, 2017: 16). In order to enable these, the planned measures include visual connections between different parts of the fortified city; plaques indicating buildings that were once part of it; a unified skyline; a plan for street names; and pedestrianisation where appropriate (City Museum, 2017: 31). The actions include a number of new built structures or functions, such as a sculpture and new bridge at the Kungsparken green area (City

Museum, 2017: 26), a rain garden in the Packhusplatsen area (City Museum, 2017: 24), and reconstructing or highlighting the two barriers that the former fortified city had with the river (City Museum, 2017: 20). There will additionally be a unifying graphic strategy (City Museum, 2017: 29) and educational tools like digital and paper maps, a website, and others (City Museum, 2017: 30).

In a later iteration of their proposed actions, the City's historic environment group listed measures targeted at compensation the West Link project as a starting point for streamlining the discussions with the STA (Email correspondence between CHEG and STA, 2020). The proposed actions include signage; markings on the street; physical models; 3D models; virtual reality, binoculars, and sound-related additions; films; maps; and construction of the city's five former portals in a contemporary style, and others.

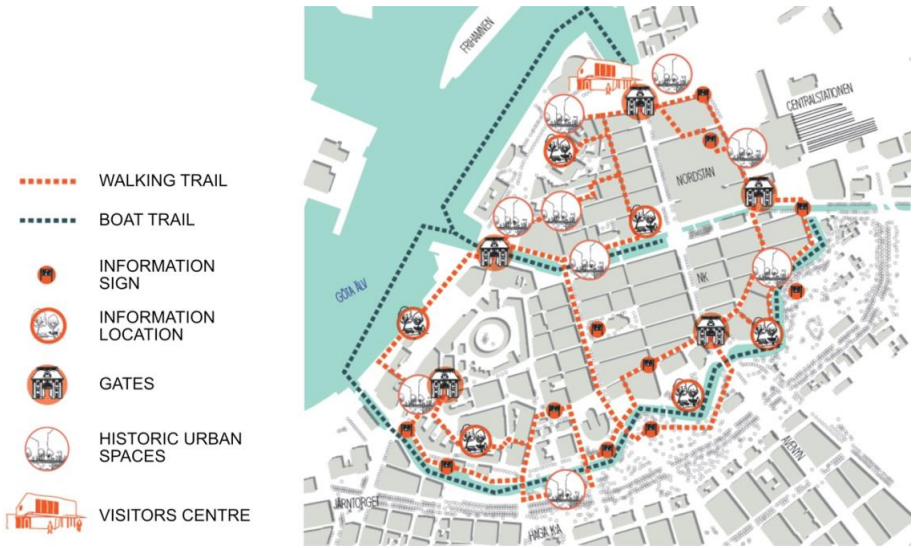

Figure 25: Compensation through storytelling about the fortified city

Source: City Museum (2017: 17)

The *second* set of actions, proposed for the landeris, aim to tie them together, as well as work with them individually. Landeris are historical agricultural properties, established from the 17th century. Of the over 30 landeris that are strewn across the city, the City's historic environment group proposes to link 13 of them together through four designed routes (City Museum, 2018). Their plan is seen in Figure 26. Actions variously include information and signage; public access, restoration, and maintenance; and new, contemporary functions, such as visitors centres, pop-

up markets, play areas, jogging and cycle tracks between them (City Museum, 2018).

Of the 13 landeris in the plan, one, i.e., Johanneberg landeri, is impacted by the West Link. Here, the STA and the City's historic environment group are collaborating in the proposed actions. The overground plans are drawn up by the City, with the STA plugging into these (STA, 2023: 53). Actions include restoring the old landeri wall, recreating the former cultivation areas and axes, enhancing the historic entrance, and building an orangerie, to name a few (STA, 2023: 53). The STA (2023: 53) will collaborate on some of the actions involving the work on the upper terrace, axes, and others they consider the West Link construction to affect.

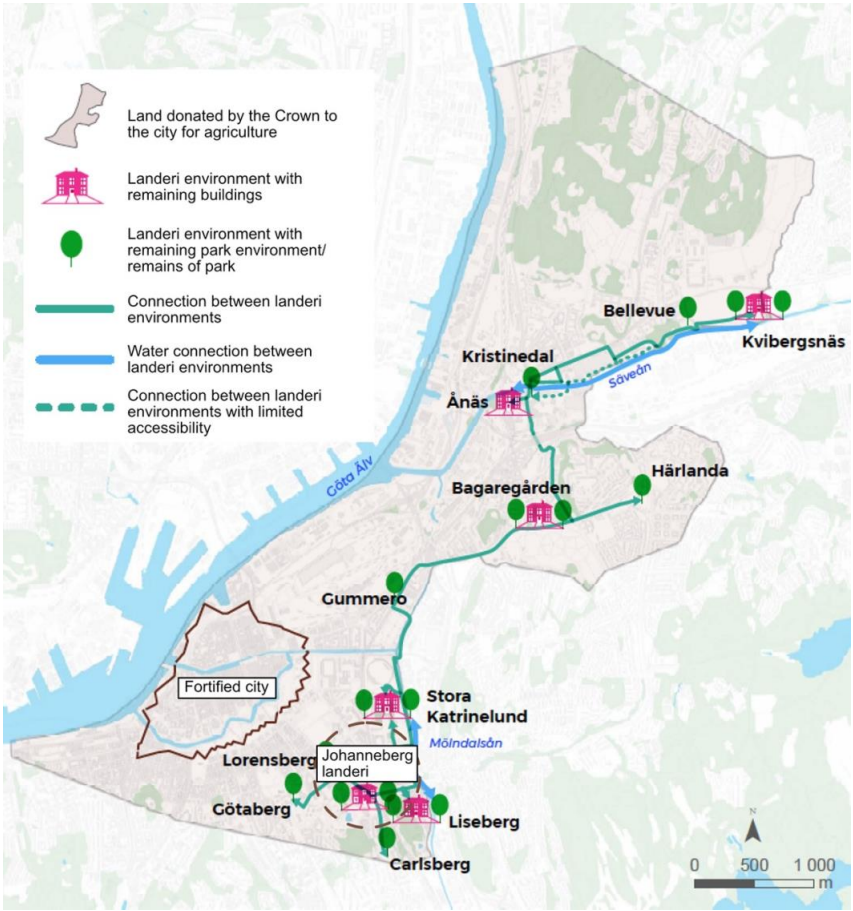

Figure 26: Compensation through storytelling by connecting 13 landeris

Source: City Museum (2018: 5)

The *third* action is in the Pusterviksplatsen area. The City's historic environment group proposes a new park at this site, in connection with the Kungsparken green area (City Museum, 2014: 14-15). The idea is to connect the new park to the historic one, and introduce contemporary functions for children, young adults, old people, and others, who are normally deprived of space in the city (Interviewee 11a, CHEG, 2022). The premise of the park as a meeting place, as it was when it was built in the 1850s, will be retained (Interviewee 11a, CHEG, 2022). The new park is an additive measure at the urban scale, yet smaller than the fortified city and landeri plans.

Overall, this chapter shows that there is a range of responses to physical loss caused by urban planning projects. From least to most change-oriented, these are: avoid damage, minimise damage, restore the historic environment to its previous state, design for visual context, compensate by strengthening, and compensate by creating. As Figure 27 shows, the Mumbai Metro lies in the realm of the first five responses, and the West Link, in all six.

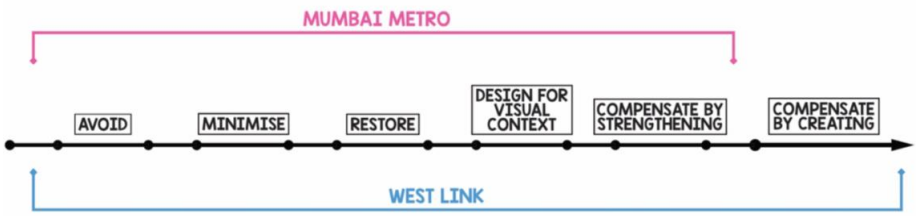

Figure 27: Case responses on the analytical tool

Diagram: Maitri Dore (2023)

Compensation is overall the most change-oriented response on the analytical tool. It takes two forms, i.e., the compensate-by-strengthening response and the compensate-by-creating response. Compensate-by-strengthening in the Mumbai Metro is very limited and different in nature as compared to that in the West Link.

Chapter 8: Preservation in the Mumbai Metro

The dominant response to historic environment loss in the Mumbai Metro takes the form of avoid-and-minimise damage and design-for-visual-context. This is shown in Figure 28. These two responses collectively aim for the preservation of physical integrity and visual integrity of the historic environment, as expressed by preservation of its material fabric. Compensation, by way of compensate-through-strengthening, is found to a very limited extent and is therefore not part of the analysis in this chapter.

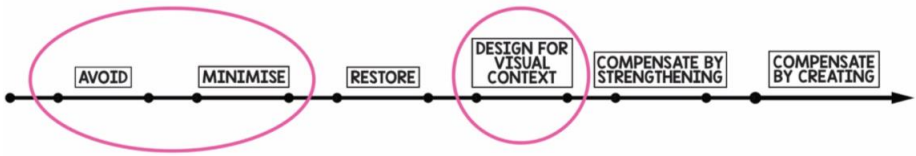

Figure 28: Preservation of physical and visual integrity in the Mumbai Metro

Diagram: Maitri Dore (2023)

This chapter analyses preservation of physical and visual integrity in the metro to draw broader inferences on conservation and planning in Mumbai. It does so in three sections: institutionalisation of heritage and conservation; DN Road and colonial nostalgia; and preservation outside listed historic environments. The first section largely looks at preservation of physical integrity; the second, at preservation of both physical and visual integrity, with a greater focus on the latter; and the third, at preservation outside the formal heritage conservation system.

Institutionalisation of heritage and conservation

The attempts to preserve the physical integrity of listed heritage in the metro are largely seen through the discussions around the realignment of the track under DN Road. The bid for preservation is a symptom of the way heritage and conservation are institutionalised in the planning context of Mumbai. There is a systemic

separation between conservation of historic environments and urban planning/development projects. This section looks at the separation through five sub-sections: heritage as the Heritage List; urban planning projects as prioritised; listed heritage as a burden; the role of the Heritage Committee; and conservation beyond material preservation.

Heritage as the Heritage List

The Heritage List forms a blueprint for the planning of the metro with respect to the historic environments. The List assists in conservation-related decision-making during planning, and among other things, forms a "framework for monitoring future changes" (Kathpalia and Narain Lambah, 2002: 8). The role of the List is most visible in the action concerning alignment of the track in the first place, and later, its attempted realignment by the Heritage Committee. The focus on alignment is not restricted to the Mumbai Metro project alone. As a Heritage Committee member states, the general procedure is for the infrastructure project and listed heritage sites to be mapped onto each other, giving an indication of which sites are in the route and whether they can be avoided (Interviewee 14b, Heritage Committee, 2022). According to another committee member, when a "heritage building" lies on the route of any proposed project, permission is normally not granted depending on the importance of the structure (Interviewee 13b, Heritage Committee, 2021). If the builders can avoid the listed heritage, this is done (Interviewee 14b, Heritage Committee, 2022; Interviewee 13b, Heritage Committee, 2021). If not, the Heritage Committee weighs in (Interviewee 14b, Heritage Committee, 2022).

Thinking of heritage in terms of a list means viewing valuable historic environments as being in short supply. This then makes preservation actions necessary. This is the starting point for dealing with listed historic environments, both in the Mumbai Metro, and more generally. As Heritage Committee member, Interviewee 1b (2021), says, there is a maximum of 5% of structures that have heritage value or are part of a well-planned development. This stock should therefore be preserved:

> "So according to me, this we should preserve, after all if you're living in a desert of concrete structures, you can have a small oasis of heritage structures. […] In the name of development, they should not erase our heritage." (Interviewee 1b, Heritage Committee, 2021)

Since the List is finite, so is what is considered heritage.

The focus on preserving physical integrity is a reflection of the way heritage is understood in the regulations. The Heritage List is a product of the *Bombay Heritage Regulations 1995*, born of the *Maharashtra Regional and Town Planning Act 1994*. This act defines "heritage buildings and precincts" and enshrines their preservation in municipal urban planning. Municipal planning as expressed in the Development Control and Promotion Regulations (formerly Development Control Regulations) is only applicable to listed historic environments collated in the Heritage List.

Preservation is further hard-wired into the qualifying criteria for listing in the first place. Historic environments gain entry to the Heritage List based on value judgements that see value as attached to physical material. Based on Mumbai's Development Control and Promotion Regulations (DCPR, 2018: 448), the criteria for listing based on architectural and historical values heavily outweigh those on natural values or those related to contemporary use. The importance of architectural and historical values translates to preservation of material fabric.

Preservation of physical material is further entrenched in the grading system. Listed buildings are graded in categories of Grades I to III (DCPR, 2018: 402-8), according to their degree of importance, offering a framework for how to deal with them. Based on the scope of physical changes permissible for Grades I to III respectively, there is no space for dealing with historic environments outside of avoiding damage, minimising damage, and doing away with the building altogether. The stated aims of working with Grade I structures is "careful preservation", of Grade II, "intelligent conservation", and of Grade III, "protection of unique features and attributes" (DCPR, 2018: 403). As a Regional Development Authority official states about projects in general, steps are taken depending on the grading (Interviewee 12b, 2022). Interviewee 2b (Heritage Committee, 2021) also sees the grading system as a guiding template for determining how to deal with listed heritage. The three grades, Grades I to III, list "which structure you can't let go [of], and which you can slightly modify or alter, and which you can […] totally let go [of]" (Interviewee 2b, Heritage Committee, 2021).

The importance of grading to conservation decisions is recognised at the national level as well. The Central Public Works Department (CPWD, 2013) states in its guidelines:

> "The primary objective of listing is to record extant architectural heritage and sites. But the outcome of this process should invariably be to grade the listed heritage into a hierarchical series. […] The importance of this process cannot be underestimated because its results determine subsequent conservation decisions." (CPWD, 2013: 14)

Listing and grading consequently determine whether and to what degree physical change to heritage is permissible. In the three-step hierarchy of grades, more productive, additive ways of dealing with listed heritage are absent.

Despite historic environment preservation drawing its legitimacy from the Heritage List, interviewees recognise the boundaries and limitations of the List. Interviewee 14b (Heritage Committee, 2022) refers to an overemphasis on built heritage on the List. They recognise that the country has a multiplicity of intangible heritage forms like art, music, culture, dance, etc, yet the emphasis on architecture remains the strongest (Interviewee 14b, Heritage Committee, 2022). Interviewee 2b (Heritage Committee, 2021) also recognises the possibilities for heritage to be more than tangible built form. They recognise that while heritage in broader terms could include intangible elements, in the judicial system or for a layperson, "heritage" is something which is in the List, in "black and white".

Heritage Committee members also recognise the values and practices attached to built heritage. For some, conserving the tangible aspects of heritage is a way to conserve practices as well, for example, fishing nets need to be dried on verandahs, not on skyscrapers (Interviewee 7b, Heritage Committee, 2022). This is a reference to traditional fishing practices which come with specific needs for built form. The statement implies that the intangible piggybacks on the tangible. Similarly, Interviewee 2b (Heritage Committee, 2022) raises the question of keeping alive practices and traditions associated with historic built forms. They cite the example of Mumbai's textile mills that have ceased to function. While the entire essence of its values is hard to retain, there is a discussion worth having about preserving and showcasing the associated memories in some way (Interviewee 2b, 2022).

Heritage in terms of the Heritage List has been critiqued by academics. Interviewee 21b (academic, 2021) says that listing and grading has a limited focus and distinguishes what is worthy of being called heritage and what isn't. They further assert that other forms of cultural life require as much preservation as what is codified as heritage (Interviewee 21b, academic, 2021).

The understanding of heritage as the List is a vestige of the early days of the movement in the beginning of the 1990s. Shetty (2004) sees it as an "obsessive tendency for classifying buildings into styles often reinforcing them with powerful adjectives". He calls into question the very foundation of what is considered heritage in the first place, arguing that in some of the writing of history with respect to Mumbai's heritage, there was a "selective glorification of certain people and certain monumental buildings" (Shetty, 2004). According to Shetty (2004), the values of architecture were "ambiguously constructed" and their histories

"concocted" by excluding other local environments that were central to the development of the city. In this way, heritage was manufactured and built environments were taken out of their urban contexts (Shetty, 2004).

Preservation of buildings based on heritage listing also overlaps with the religious values of the buildings. This is seen in the case of two listed Atash Behrams that lie on the metro route. Atash Behrams are fire temples of the highest order, and sacred to the Parsi-Zoroastrian religious community. They house the highest grade of fire of all Parsi fire temples, and the spiritual circuits between the fire and the core of the earth protect it (Interviewee 25b, advocate to the petitioners, 2023). There are only eight Atash Behrams in the world. They were discussed to varying degrees in court as well as by the Heritage Committee.

With the metro passing under the two Atash Behrams, members of the Parsi community went to court seeking realignment of the track. Their arguments were based on spiritual as well as structural reasons (Interviewee 25b, advocate, 2023). From a spiritual point of view, the tunnel passing under the temples would cause a loss in spiritual connection of the sacred fire to the core of the earth and motion under the premises was undesirable (Interviewee 25b, advocate, 2023). From a structural point of view, the construction of one of the metro stations in the vicinity would compromise the structural safety of the buildings (Interviewee 25b, advocate, 2023). Additionally, the metro construction would have spiritual consequences. If the wells on the premises dried up, there would be no sacred groundwater for various rituals (Interviewee 25b, advocate, 2023).

The case reached massive proportions in court. It was argued at the High Court and Supreme Court levels on the grounds of rights to religious freedoms and equality based on various provisions in the law (Bombay High Court, 2018: 16). Finally, the station was moved so as to be 20m away from the temple boundary wall (Mehta, 2019) and the proposed tunnel under the temples was also moved by 3.5m (Sarkar, 2018).

Since the temples are "heritage buildings", this factor was also invoked in court. The petition mentions the inscription of the two Atash Behrams on the Heritage List as Grade III structures, their age (188 and 122 years old), as well as the structural risk to them (*Writ Petition No. 2890 in Bombay High Court 2018*). The heritage status did not find much mention in court – probably because the religious argument was perceived as stronger.

Outside court proceedings, it seems like the heritage aspect of the matter was not taken up in a big way. This is despite the buildings' heritage listing being partly based on its religious values, as stated by Interviewee 2b (Heritage Committee,

2023). A Heritage Committee member confirms that the petitioners approached the committee, who did take up the issue with the metro developers. But the discussions did not go further after the developers made assurances that they would safeguard the buildings (Interviewee 2b, Heritage Committee, 2023). Overall, there was little information available on how the issue was taken up on "heritage" grounds.

Urban development as prioritised

The negotiations in the Mumbai Metro case are largely characterised by the Heritage Committee making and reiterating their demands and the Metro Rail Company resisting them. A committee member comments more generally that negotiation means a middle path between "heritage" structures and – in this case – infrastructure projects is required (Interviewee 2b, Heritage Committee, 2022). The committee "have to let go of some part of heritage and accommodate some part of the infrastructure project" or otherwise reroute the project if they feel that something cannot be let go of (Interviewee 2b, Heritage Committee, 2022). However, the planning priority is in the technicalities of establishing the most suitable route. Project developers do consider "heritage", but to a limited extent.

> "[…] for them the priority would be to […] fix the alignments and […] curvatures and everything like that, and feasibilities and […] what is what goes under the road what goes above the road." (Interviewee 2b, Heritage Committee, 2022)

Even outside of the developer perspective, infrastructure projects are seen to have greater importance than listed heritage. In the metro case, the Municipal Commissioner eventually overruled the committee's recommendations for realignment of the track under DN Road. According to media reports, the commissioner said that the metro project was more important.

> "After careful deliberation on the merits of the case, I have come to the conclusion that this is a fit case for exercise of powers under [Development Control Regulations] 67 (2) as this is an infrastructure project of extremely vital importance for Mumbai. Also I am satisfied that there is no viable alternative." (Kunte, in FPJ Bureau, 2019a)

Infrastructure projects are seen to be in "the larger public interest" or catering to "the bigger picture" (Interviewee 2b, Heritage Committee, 2022). One committee member interprets the overruling of the committee's recommendations, stating

that with the metro, the municipal commissioner "can do whatever he wants" (Interviewee 7b, Heritage Committee, 2022).

The "public interest" argument is also put forth in the judicial case regarding the Atash Behrams. As reported in the media, the counsel for the Metro Rail Company stated that the rights of the public outweighed those of a single community (Aney, in Deshpande, 2018). A Metro Rail Company representative echoes the sentiment, stating that despite eventual permission to build, there were lengthy delays (Interviewee 10b, Metro Rail Company, 2022). In relation to the case, they state:

> "[…] the problem is whatever is the background the losers are the people because all the money is going through the taxpayers. So, that is […] very sad." (Interviewee 10b, Metro Rail Company, 2022).

The flip side to this view is from the conservationists, as represented by the Heritage Committee, who feel that conservation is given lower priority and urban developers do not compromise. They said that the Metro Rail Company needed to adopt an "an open minded approach" (MHCC meeting minutes, 26 November 2013). Their assumption is that the Metro Rail Company would not have wanted to realign the track based on the committee's demands because the plans would have been prepared and change would come as a great financial cost (Interviewee 1b, Heritage Committee, 2021).

The arguments about realignment do not hold much water from either side, according to Interviewee 22b (academic, 2021), who was part of some of the meetings in their capacity as member of another official heritage body. They state that the Heritage Committee's argument about potential congestion and constructing under the foundations was not sound (Interviewee 22b, academic, 2021). On the other hand, the Metro Rail Company's consultants displayed an inflexibility to budge from their plans (Interviewee 22b, academic, 2021).

> "It was, one, people not understanding that there is possibility in design and technology [to building under a heritage precinct], and the other set of people being simply lazy and not ready to work a little bit more." (Interviewee 22b, academic, 2021)

The view reflects that parties advocating on the sides of both conservation and urban planning projects have hardened positions. Interviewee 22b (academic, 2021) argues that both parties were both right and wrong, but the larger point that is missed is the debate on "urban form" and designing the project in spatially sensitive ways. Planners look at technical requirements and listed heritage as an

add-on, rather than the urban form that their projects should aspire to engender (Interviewee 22b, academic, 2021).

Listed heritage as a burden

In a planning system where conservation and urban development are kept apart, developers, politicians, and the administration in general view listed heritage as an obstacle to urban planning projects.

> "[…] as far as heritage is concerned, that was considered as a nuisance, so generally, there was not much of enthusiasm or interest in supporting heritage. […] [The Development Plan] Department [of the Municipality] is not very enthusiastic about it except for the Deputy Municipal Architect in charge of heritage. That fellow will try to follow the dictates of the committee, give clearance, or ask questions and all. But otherwise, the [Development Plan] Department is not particularly enthusiastic or concerned about heritage. That is how the system works." (Interviewee 1b, Heritage Committee, 2021)

Listed heritage is further considered to be dispensable.

> "People can say, when matters like health, education, livelihood and then infrastructure development, construction of roads, railway lines, when these matters of national development, are probably more important, heritage is a luxury which probably we cannot afford." (Interviewee 1b, Heritage Committee, 2021)

This view reflects listed heritage as being unrelated to other societal concerns, which make it viewed as optional. In the light of what is considered disregard or indifference to historic environments, the Heritage Committee's approach to dealing with them translates to preservation of listed heritage. One member reflects:

> "[…] usually our approach was that once any proposal referred to a notified or identified heritage structure, our decision should preponderantly look at conserving it. […] so we would ensure that the scales weigh in favour of the conservation and maintaining the integrity of the structure rather than the other way round. And if the repairs or alterations which would hurt or damage the structure were sought, we would refuse it" (Interviewee 13b, Heritage Committee, 2021)

In the balance of conservation and urban planning projects, members express the sentiment that the latter carries more weight in decision-making. In the metro case, they were also therefore concerned about policy that would enable new development projects on DN Road if developers were given additional building

incentives (to build high-rises) in the form of Floor Space Index (MHCC meeting minutes, 8 November 2013). One committee member states:

> "I've sat on many committees locally in heritage and had to protest, so you know, the question is, no one is against development, but you can't just have a car without a brake. So, we conservationists are like a kind of a brake. But the idea is whether the brakes are respected as a part of the vehicle or are considered as obstruction." (Interviewee 17b, Heritage Committee, 2021)

This view reflects a concern with wanton urban development projects that risk swallowing up historic environments. Accordingly, when it comes to listed heritage, preservation of the physical structure is seen as the way to slow it down.

Further, urban developers are characterised as land-grabbing cut-throats who will go to any lengths to monetise plots of land. This threat is especially in Mumbai, and even more so in south Mumbai, where real estate is of prime value. Most listed heritage, the majority of which is colonial-era heritage, is located here. One Heritage Committee member sums up the threat in general terms:

> "Supposing there is a historical building which is in a cluster which a developer wants to redevelop, then he will like this historical building or the heritage building to be demolished. And he may manouvre and manipulate to see that the permission is granted. Or that structure is removed from the list of heritage buildings. Anything of that kind can happen." (Interviewee 13b, Heritage Committee, 2021)

The statement casts developers as devious and shows the threat they pose to historic environments.

Conservation and urban development are further drawn apart by politicians who have conflicting views from conservationists. Heritage Committee members cite government apathy towards conservation (Interviewee 1b, 2021; Interviewee 17b, 2021). The attitude also shows in the paucity of funding allocated for conservation and maintenance of listed heritage (Interviewee 1b, Heritage Committee, 2021). Government apathy is not only at the city-level but at state and national levels as well. Interviewee 1b (Heritage Committee, 2021) refers to the State Archaeology Department operating on behalf of the national government, as "a very weak department" where the post of director is largely vacant, there are hardly any staff, and where "very, very little work is being done". Interviewee 17b (Heritage Committee, 2021) further cites the absence of a dedicated conservation ministry at the national level, even after over 70 years of independence.

Politicians are not just seen to be apathetic but actively in collusion with urban developers and against conservation. The media has reported that political parties

have on occasion demanded that the committee be dissolved because it is an obstacle to development projects (Vasudevan, 2015). Two Heritage Committee members talk about how politicians favour private developers:

> "[…] sometimes in Bombay, one has to be careful […] sometimes the builders and developers lobby will directly work through the Chief Minister. And many times, the integrity of political masters cannot necessarily be taken for granted. So, all that kind of conflict will always happen. […] Especially in Mumbai, where real estate and reconstruction and repairs and things of that kind are a big, prized kind of things, […] involving crores of rupees." (Interviewee 13b, Heritage Committee, 2021)

> "[…] there are a lot of pressures which are, brought […] both on the political leadership as well as on the administrative machinery for dismantling of everything, because […] when you want to develop an area, if there is some heritage structure, there a lot of commercial forces come into play which want the heritage structure dismantled and the area commercially exploited. So, it's a constantly, these pressures are there which are keeping nibbling away at heritage from time to time." (Interviewee 1b, Heritage Committee, 2021)

These statements show that politics is deeply embedded in the planning system, with listed heritage being the casualty.

There are problems with the way both politicians and conservationists see conservation in planning. Politicians are inspired by the east, while conservationists, by the west, "but no one sees the centre or the real realistic situation" (Interviewee 17, Heritage Committee, 2021). This implies that politicians are interested in building and its monetary value. Places like Shanghai and Singapore symbolise progress and are frequently cited as model cities to aspire to. Conservationists on the other hand, look to the west, particularly Britain and its "conservatory environment" (Interviewee 17b, Heritage Committee, 2021). This is a controlled environment not replicable in an Indian context where needs and aspirations are different (Interviewee 17, Heritage Committee, 2021). Conservation in India needs to be flexible, recognise the needs of people, and take into consideration wider social and economic concerns (Interviewee 17b, Heritage Committee, 2021).

There has also been a policy change in heritage regulations in Mumbai. This is by way the most recent dilution of heritage regulations in Development Control and Promotion Regulations (DCPR, 2018, from its previous version, the Development Control Regulations (DCR, 2008). Despite their enduring focus on building material, the latest guidelines subvert the previous guidelines with respect to preservation. The scope of permissible physical changes to listed buildings has

been modified. Where previously, additions in the vicinity of Grade I structures were forbidden (DCR, 2008: 227), they are now allowed under certain conditions (DCPR, 2018: 404). Previously, there were various conditions for the reconstruction of Grade III buildings (DCR, 2008: 227-8), now they are left to the discretion of the Municipal Commissioner (DCPR, 2018: 405). The additional condition for demolition of Grade III buildings is now that they must be completely documented before demolition (DCPR, 2018: 406).

The dilution of the regulations also affects the reach of the Heritage Committee as seen in repair works permissible for Grade I and III buildings. For Grade I buildings, repairs previously required input from the committee (DCR, 2008: 228), however, now the regulations additionally mention decision-making by the Municipal Commissioner (DCPR, 2018: 405). For Grade III buildings, committee input is no longer required for what the DCPR (2018: 404-5) calls "minor/structural repairs" and "periodic maintenance". These repairs now only require the Municipal Commissioner's approval (DCPR, 2018: 405-6). Overall, the current regulations are more change-oriented and less in the hands of the committee. They enable change by way of demolition, which the media reports, would be "a blow to the city's heritage" (Purohit, 2015).

The government and existing policy side-line heritage conservation. However, for Interviewee 22b (academic, 2021), the regulation route is not the way to go when it comes to heritage conservation, and it has in fact been detrimental to "heritage buildings". They critique actors in the current system, both planners and conservationists.

> "This is what planners and largely […] the activist group think, that […] you do it through legislation and regulation, but with this legislation regulation, nothing can ever happen […] because heritage is a cultural [form?] and it is impossible fundamentally to legislate culture […]." (Interviewee 22b, academic, 2021)

Regulations and legislation are only one aspect, a techno-legal one that cannot govern cultural issues surrounding people's lives, work, attachment to places, and so on (Interviewee, 22b, academic, 2021). According to them, the heritage discourse needs to emerge from an economic, rather than legislative context (Interviewee 22b, academic, 2021).

Role of the Heritage Committee

The Heritage Committee has an institutional mandate which offers little wiggle room for dealing with listed heritage outside the scope of preservation. It is notified by the Urban Development Department of Maharashtra state and administered by the Municipality. The Committee's main task is to weigh in on and advise the Municipal Commissioner on building permissions with respect to listed heritage. When a planning proposal is submitted to the Development Plan department of the Municipality, and is seen to encounter listed heritage, it is referred to the Heritage Committee. They vet the project from the point of view of listed heritage before allowing it to proceed. In this context, the Heritage Committee's role is largely limited to permissions and consideration of urban planning and development projects. Further, the regulations that they work with, have in their scope a material fabric focus, with options ranging only from preservation to demolition (as the spectrum of grading reflects). Against this backdrop of limited options, the role of the committee crystallises into one of pushing for preservation.

Even the preservation mandate is hard to execute, given that the odds are systemically stacked against the functioning of the Heritage Committee. It is an advisory committee with no regulatory powers. The appointment of the committee, which takes place every three years, is itself not something that cannot be taken for granted. This was the case in 2011, when the Urban Development Department did not renew the committee's term in time, and the city did not have a Heritage Committee for nearly a year (Express News Service, 2015). During this period, as a former Heritage Committee chairperson states, many listed heritage buildings were lost (Ranganathan, in Vasudevan, 2015). The same concern crept up in 2015 (Vasudevan, 2015).

The Heritage Committee consists of a mix of appointed and nominated members, usually chaired by a retired bureaucrat. Members are from the Municipality, architects, structural engineers, and historians, to name a few professions. The composition of the committee confirms its focus on built heritage. One member states:

> "It is important to have professional architects and professional […] structural engineers, who understand the intricacies of construction, how to preserve and conserve a particular feature without damaging the basic characteristics of the feature" (Interviewee 13b, Heritage Committee, 2021)

Further, despite the Committee's uniform formal mandate to deal with building permissions, its heterogenous composition means that members have their own professional and intellectual starting points. These can sometimes struggle against the committee mandate and are not even always the same for individual members. So, committee members can simultaneously be architects as well as academics or simply conservation enthusiasts. One committee member, referring to their three different professional roles, states:

> "[…] these are three people. […] what would you choose me to behave as […]?" (Interviewee 7b, Heritage Committee, 2022)

This quote is a reflection of the various hats a committee member might wear. For the interviewee, as Heritage Committee member their job is to represent the Municipality and to see to it that the regulations are followed, regardless of whether they personally agree with the building proposal or not (Interviewee 7b, Heritage Committee, 2022).

Despites the constrictions of the regulations, the Heritage Committee attempts to go beyond dealing with physical loss to individually listed heritage buildings, and raises wider urban planning issues. This is seen in the metro, as they attempt to prevent congestion in the area, by demanding restrictions on building potential by way of incentive Floor Space Index to developers (MHCC meeting minutes, 8 November 2013). Congestion is the result of car traffic, and accordingly, Interviewee 17b (Heritage Committee, 2023) states that the regulations should disallow the construction of car parks in buildings if metro use is to be encouraged. This recommendation, in addressing the possibility of congestion, lies outside the purview of individual buildings but within the experience of the area in general. It further shows a concern for rethinking building regulations in "heritage" areas, outside of the committee's mandate.

The Heritage Committee further questioned the planning procedure, asking whether other utilities and infrastructure projects in the area had been considered (MHCC meeting minutes, 26 November 2013). They asked that not only heritage structures but also utilities and traffic and pedestrian movement be mapped on the drawings (MHCC meeting minutes, 26 November 2013). They even questioned the very basis of constructing a metro in that part of the city, asking whether "it [was] really necessary to have a new mode of transport in the form of [the metro]" (MHCC meeting minutes, 8 November 2013). They raised concerns with having "so many Metro stations in close vicinity of the existing railway stations" (MHCC meeting minutes, 26 November 2013). Equally, they asked why the metro wasn't

being extended into the nearby central business district (MHCC meeting minutes, 8 November 2013). As Interviewee 17b (Heritage Committee, 2021) elaborates, extending it would have served some purpose since the eastern waterfront of the city is opening up. This reflects that the Heritage Committee, despite their limited mandate to deal with building permissions, attempt to reach into areas of city planning outside the bounds of physical and structural issues concerning listed heritage.

Conservation beyond material preservation

Overall, the preservation actions in the metro and of conservation in general, reflect the silo built into the planning system and transmitted, albeit patchily, to those who work within it. Practitioners and academics, however, recognise the limits of current practice.

The preservation focus keeps listed heritage dissociated from its wider context, not only physically, but also economically and socially. In the case of physical context, Interviewee 17b (Heritage Committee, 2021) says that individual built elements are conserved in isolation from their wider settings. Interviewee 2b (Heritage Committee, 2022) hints at the need for actions that add to historic environments rather than simply keep them away while planning new projects, and critique the existing approach.

> "[…] when you take any government agency, or any of these private infrastructure players, the approach is not how they can conserve or add to the heritage, but is how they can avoid conflict with the heritage. That is the approach, which perhaps […] does not go well with activists, heritage activists or conservationists." (Interviewee 2b, Heritage Committee, 2022)

A move beyond this constructed separation according to them would involve looking at conservation in a productive, additive way. They elaborate:

> ""Add" in the sense […] to give a positive consideration, perhaps create a nice setting around through your work or anything like that. Not all structures or sites are in proper condition or good condition. So, maybe they could, wherever they pass through, they could add some kind of setting or […] give some value addition to that heritage structure." (Interviewee 2b, Heritage Committee, 2022)

This view places individual buildings in their wider physical contexts and brings in the focus on physical additivity to historic environments.

Economically speaking, interviewees comment on the absence of financial governmental incentives for conservation and comment that conservation should be tied in with financial incentives (Interviewee 17b, Heritage Committee, 2021).

> "[Heritage conservation] has to be flexible, it has to adjust to the needs of the people. You can't say, don't change this, don't change that. […] you're not giving any incentives. You're not giving any rebates, you're not giving a tax discount. You're just saying do this, do this." (Interviewee 17b, Heritage Committee, 2021)

The interviewee argues for keeping heritage at the centre while also plugging into other concerns, commenting that heritage can generate employment, arts and crafts, and sustainability.

The wider context is emphasised by Interviewee 22b (academic, 2021) who stresses the need to look at the wider political economy. There is a need for an entire ecosystem around heritage, an industry with a "very thick set of agents and actors and stakeholders" (Interviewee 22b, academic, 2021).

Overall, this section has shown that conservation and urban planning as systemically separated, a factor that also reflects in the metro case.

DN Road and colonial nostalgia

Preservation of both physical and visual integrity take shape in the responses on DN Road. DN Road is an especially significant expression of the former colonial city and the focus of several conservation initiatives. The road, formerly Hornby Road, ran along the inner edge of the erstwhile fort walls. It became important when the walls were razed in the 1860s, opening up space for construction (Narain Lambah and MMR-HCS, 2002: 3). While the individual buildings could have their own façade designs, each was supposed to have an arcade at the ground level, to string them together into a unified entity (Mehrotra, 1997: 27). The road was later renamed after Dadabhai Naoroji, a highly influential Indian nationalist leader.

Branded "The Heritage Mile", DN Road has received a lot of attention from conservationists over the past few decades. It is considered important for its eclectic streetscape, pedestrian arcade, and for being one of the first of its kind in planning (Narain Lambah, n.d.). The Bombay Heritage Regulations of 1995 declared the road a "heritage streetscape" and each building on the stretch was listed with Grade II status (Narain Lambah, n.d.). The MMR-HCS conservation body, in its first assignment, commissioned the streetscape project for the road, a documentation of the entire stretch with design recommendations for "heritage

sensitive street furniture and signage" (Narain Lambah, n.d.). This resulted in the first handbook of urban conservation guidelines in the country (Narain Lambah, n.d.). The project spawned The Heritage Mile association, a non-profit of tenants, shopkeepers, and owners on the road to work towards its conservation (Narain Lambah, 2009). The architect behind the streetscape project, Abha Narain Lambah, went on to win the Unesco Asia-Pacific Heritage Award of Merit for this project (Abha Narain Lambah and Associates, n.d.). DN Road is part of the Unesco-listed Victorian and Art Deco Ensemble World Heritage Site, inscribed in 2018, and one row of its buildings are in the buffer of the CST World Heritage Site. These are two of the three World Heritage Sites in Mumbai. All this shows that DN Road and its buildings are considered especially significant in conservation practice.

Figure 29: Metro construction on DN Road

Photograph: Maitri Dore (2022)

The importance of DN Road is expressed in the metro case by both the Heritage Committee and Metro Rail Company. Members of the Heritage Committee invoked the former fort walls, stating that their foundations were of "archaeological importance and excavation of D.N. Road [would] obstruct and destroy the archaeological remains dating back from 18th Century" (MHCC meeting minutes, 26 August 2014). The importance of the fort walls is also mentioned by individual committee members (Interviewee 1b, 2021; Interviewee

17b, 2021). The Heritage Committee even referred to DN Road fondly, as the Heritage Mile, and stated its importance as a "major artery" for pedestrians (MHCC meeting minutes, 26 August 2014). This was a reference to the Victorian arcade. The arcade, shown in Figure 30, is considered an important building element (Interviewee 17b, Heritage Committee, 2021).

Figure 30: Arcade on DN Road

Photograph: Maitri Dore (2022)

One committee member says the uniqueness of the stretch merits a demand for track realignment:

> "[…] the Heritage Mile is the only part of the city where you find a continuous set of heritage buildings […]" (Interviewee 1b, Heritage Committee, 2021)

DN Road is considered a microcosm of valuable historic buildings and its visual integrity, crucial. In this context, one member refers to the design of the new overground structures of the station:

> "How do you connect a metro in such a way that you camouflage this coming out and not destroy this city, the cityscape, the streetscape? […] So, now when we are doing something let us respect the existing [DN Road]. Do your bloody metro station, I don't care, but why do you destroy [DN Road]? Take out an exit into an alley, into a lane, why destroy [DN Road]? Something like that. You can do that if you wish to. You should also take care to see that the foundation of the buildings on [DN] Road are not shifted" (Interviewee 7b, Heritage Committee, 2022)

The Heritage Committee was also concerned with the location of the entry and exit points of the Hutatma Chowk Station as being "an eyesore on DN Road" (MHCC meeting minutes, 8 January 2014). They further saw increased building potential by way of additional Floor Space Index (FSI) as detrimental to the experience road more generally.

> "So, you want to redevelop DN Road also. So, then what are you left with?" (Interviewee 17b, Heritage Committee, 2021)

These statements point to the exceptional value of DN Road. Its value is cited by the Metro Rail Company as well, in their design considerations of the Hutatma Chowk Station (Maple and MMRCL, 2020: 64). One representative further stresses the importance of preserving its visual integrity, stating that a roofless metro for Hutatma Chowk Station is important in order to make the rest of the buildings on DN Road "very clear and visible" and without "hindrance [when] viewing them" (Interviewee 10b, Metro Rail Company, 2022). These aims are operationalised through the location, design materials, and stylistic interventions, characterised by the interviewees as either "period" or "contemporary" in style. Both types, though different in execution, have the same goal of foregrounding the surrounding historic environment.

The aim for visual integrity in the metro speaks to the more general mention of visual integrity of "heritage precincts" in the regulations. As with the permissible scope of physical changes to buildings, these regulations too have been watered down. The previous regulations stated that the skyline of buildings in precincts be maintained in sync with the surroundings "without any high rise development" (DCR, 2008: 225). The latest regulations tone down this guideline, asking for maintenance of the skyline "as far as possible" (DCPR, 2018: 401). Regardless, high rise buildings are allowed in precincts, thereby resulting in a break in visual continuity of the historical built environment. A recent example of this is seen in the permission granted for the construction of a nearly 70m skyscraper in the Fort heritage precinct (HT Correspondent, 2023). DN Road is located in the Fort precinct.

The aims of the metro to preserve the visual integrity of DN Road dovetail into the general conservation aims for DN Road historically. The architect who led the DN Road streetscape project in the 1990s writes about most of the buildings being unlisted (Narain Lambah, 2009). She refers to:

> "[…] deteriorating facades, buildings protected by the Rent Control Act and ugly shop signs that obscured the beautiful gothic and Victorian architecture" (Narain Lambah, 2009)

The architect's work on DN Road involved proposals for managing the aesthetics on DN Road by creating an identity for it, though guidelines on standardised shop signage, street furniture, removal of billboards, and so on (Narain Lambah, 2009). These guidelines were expressed in a formally recognised handbook (Narain Lambah and MMR-HCS, 2002). The guidelines form a reference for street furniture in the metro case, as proposed by the consulting architects (MHCC meeting minutes, 31 July 2018). The authors of the handbook cite the road's crumbling aesthetic condition as part of the reason for writing the guidelines.

> "The elegant architecture of many historic buildings has been defaced by incongruous air-conditioning units, poorly designed sign boards, addition of upper floors and changes to the original colour scheme and fenestration. The bustling arcades are further congested with a multitude of hawkers and street dwellers, while the pavements suffer from a near breakdown of civic infrastructure with inadequate and poorly designed street furniture." (Narain Lambah and MMR-HCS, 2002: 6)

There is a concern with keeping the buildings on DN Road free from being hampered by what the authors consider visual hindrances, either in the form of certain material or human presences.

The DN Road streetscape guidelines reflect a colonial nostalgia, as seen in the fond reminiscing of the mighty spine that the road once was.

> […] this stretch became an integral part of the city's ceremonial axis, which took the visitor coming by boat from the Gateway of India, down to Victoria railway terminus, on his journey to the great Indian hinterland." (Narain Lambah and MMR-HCS, 2002: 3).

The sense of nostalgia for a past that was better than the present is also expressed by the architect who led the project:

> "I'm not saying that the city should shy from development, just that there is no need to trample on its history in the process. People keep talking about turning Mumbai into another Singapore. I think we should turn it back into Bombay." (Narain Lambah, 2009)

Here, a nod to the colonial past is seen in the architect's aspirational usage of the city's British-given name.

DN Road needs to also be looked at in the context of the wider Fort area – the former colonial core of the city. It was meticulously planned by the colonial government when the walls were razed (Mehrotra, 1997). The urban plans instated around the former fort were perhaps the first of their kind in colonial India (Mehrotra, 1997: 26). Today, Fort has an overwhelming proportion of listed heritage, and forms its own heritage precinct consisting of 14 sub-precincts. As the heritage activist and local resident, Nayana Kathpalia, and conservation architect, Abha Narain Lambah describe in their conservation manual:

> "The Fort precinct is the largest and most monumental or all the precincts in the city. Consisting of the bulk of the city's landmark buildings, this area was defined by the old fort ramparts of the British town. Though the walls were brought down in the mid 19th century, the name persists and the area, even today is the heart of the city's commercial and institutional district." (Kathpalia and Narain Lambah, 2002: 31)

Fort has been the focus of numerous conservation efforts, plans, and publications over the past few decades (cf. Mehrotra and Nest, 1994; Mehrotra, 1997; Urban Design Research Institute and Marg, 2000; Rachana Sansad Academy of Architecture and MMR-HCS, 2002; Mehrotra, 2000; Urban Design Research Institute, 2004; and several more). The Fort area is also home to an affluent, highly educated citizenry, that actively champions heritage protections. As the media reports, this citizen activism formed the beginnings of the movement that led to Unesco listing for the city's Art Deco and Victorian Gothic clusters of buildings in 2018 (Kulkarni, 2018). It is also seen in how one residents' associations, through their activism, took over the management of a Grade I-listed city park from the state government (Mehrotra, 2004).

The aesthetic approach to DN Road and conservation in Fort more generally can be situated in a wider context of colonial nostalgia that pervades the conservation movement in Mumbai. According to Nakamura (2014: 19), "urban heritage, in its current conception, reduces the history of Mumbai to colonial achievement, nostalgia, and elitist esthetics". For Mehrotra (1997: 30), the presence of illegal hawking in DN Road's Victorian arcades is symbolic of the clash between contemporary use and the elitism associated with conservation as the preservation of a certain image of the city. Hawkers are symbolic of the "kinetic" city, which is embodied by a constantly shifting urbanism that must be considered in urban planning (Mehrotra, 2007).

The aesthetic focus and nostalgia for a certain version of the past was embedded in the heritage movement since the early 1990s. Shetty (2004), connects

the former to the movement's elitism. The longing for a pristine environment is what he identifies as "a pride to claim a European legacy and an aspiration for living in a European environment without hawkers in the arcades and air conditioners on building facades" (Shetty, 2004). In this scheme of things, interventions such as new development projects are variously framed as "abrupt/hazardous/insensitive/threatening" to the historic environment (Shetty, 2004). In his opinion, hawkers and high-rise buildings that are seen as a threat to the curated aesthetics laid out by some heritage activists, are in fact "functions of the economy" (Shetty, 2004).

Nostalgia too is a part of the movement's roots, soaked in a colonial focus and European tropes (Nakamura, 2014: 7). Mehrotra (2004: 27) too refers to nostalgia as a dominant part of the movement, in what he calls "the postcard city syndrome". Shetty (2004) refers to the nostalgia in his analysis of the link between historiography and the heritage discourse, as he points out that in India, "champions of heritage repeatedly use history of the "glorious past" as the primary and the only defining framework for valuing something as heritage".

Preservation outside listed historic environments

Claims to preservation are also mobilised by non-institutional actors such as NGOs, religious groups, and ordinary citizens in cases of affected unlisted historic environments. This section looks at their demands for preservation of values attached to green areas, houses and workplaces, and religious built forms.

Green areas

A major issue with respect to the metro was in the context of the Aarey forest at the northern end of the line. Aarey is an urban forest of approximately 3000 acres, and environmental activists and NGOs had opposed the plan for a depot there and protested against the felling of trees for the purpose (Save Aarey website, 2017). According to some reports, the toll on trees would be over 2500 (DNA Correspondent, 2019). At least 12 petitions were reported to have been filed in the Bombay High Court (DNA Correspondent, 2019). Objections to having a metro depot at Aarey were based on the loss of trees and correspondingly, the flora and fauna they sustain, including some endemic species (Livemint, 2022). Animals in Aarey include leopards, scorpions, and various snakes (Kolachalam, 2022). The

social costs from the damage to the natural environment at Aarey was also a concern, since many tribal communities reside in Aarey and depend on the forest's ecosystem (Kolachalam, 2022). According to media reports, the shed would displace 3500 tribal families, resulting in the loss of homes and livelihoods (Kaskar, 2023).

The issue around Aarey is also politically charged. The Save Aarey Movement gathered political support (Rawal, 2020). When the party backing the movement came to power in the state in October 2019, they moved the planned metro depot to a different plot of land. They further declared plans to legally protect 600 acres of the total acreage of Aarey as a designated reserved forest (Chatterjee, 2020). In July 2022, when a different government came to power, one of the first actions they took was to reinstate the metro depot back at the Aarey plot (Phadke, 2022). This is where construction is currently underway. Political feuding between the state and national level governments is seen to play out in the decisions about the metro depot.

Activists also agitated against the destruction of mangroves for the metro's construction (Naik, 2016). Mangroves, that lie in the boundary between water and land, are fragile ecosystems that protect the coast, among other ecological benefits (The Nature Conservancy, 2023). The Metro Rail Company too acknowledges the impacts to them from the project (Rites and MMRCL, 2011: 9-23). Based on media reports, this issue however gained greater prominence in the context of other large infrastructure projects in the city (Shantha, 2019).

Houses and workplaces

The metro goes under several densely packed areas of the city with narrow widths. This means houses and workplaces have had to be demolished and people have had to be displaced. Rehabilitation of dwellings and resettlement of affected inhabitants is a provision in the law. This aims "at assisting people during resettlement and also in improving or at least restoring their former standards of living and income earning capacity" (Maple and MMRCL, 2020: 45). Resettlement may be temporary, for the period of construction, or permanent. Either way, the Metro Rail Company was met with opposition from inhabitants unwilling to move. Consequently, they demanded realignment of the track.

According to the Metro Rail Company's estimates, 1520 families were going to be affected since their homes were in the corridor path (Rites and MMRCL, 2011: xxiii). These figures correspond to 6074 people (Rites and MMRCL, 2011: 9-17)

and the temporary or permanent displacement of over 900 building structures and informal dwellings like hutments (2011: 9-8).

Some of the areas being affected are Girgaon and Kalbadevi in the vicinity of the metro stations. Over 750 families are cited as being affected by the construction (Maple and MMRCL, 2020: 438). The inhabitants of this area cite having adequate transport facilities and the difficulties of resettlement, and demand realignment (Maple and MMRCL, 2020: 440). The social toll is apparent in the notes from the public consultation process and suggest the social and community value that its residents hold. One of the grievances recorded states:

> "Here these families are staying since last 50 yrs. Their many generations have been staying there at the same place." (Maple and MMRCL, 2020: 440)

One inhabitant, speaking to the media, said she had lived in the area for 40 years and did not want to be resettled in a far-off location (Patankar, in Ganapatye, 2018). The attachment to the area runs deep.

Similar attachment is seen in the case of people livings in chawls. Chawls are a typology of communal living developed from the 19th century in Mumbai. They support a social fabric among its residents enabled by common amenities like courtyards, corridors, and open spaces. The media reported the demolition of three chawls in the Girgaon area. On report quoted an inhabitant who said:

> "We are attached not only to our property but also to the area. It has its unique culture and ethos. We are not willing to shift." (Unnamed resident, in Mehta and Jain, 2019)

The inhabitants of the chawls will have to move into high-rise buildings in the same location. However, the embedded social value of the chawls is considered irreplaceable even with the new construction on the same site (Borpujari, 2019). One resident highlights the expected loss of sense of community:

> "We cried a lot, because we knew that it was the last party together and that all of us would be spread out in different directions. Even if we all get back together in the new houses that are developed for us, it won't be the same." (Gawde, in Borpujari, 2019)

The chawl typology of housing exemplifies a historic environment with social and community value that does not readily get codified as heritage. According to Interviewee 22b (2021), the formulation of "heritage" in the beginning of conservation movement in the 1990s excluded chawls.

> "Built form was not related to life. […] So, […] when it came to protect the chawls nobody […] said anything […] because they were dilapidated, […] they did not look very good, […] they were kind of silent about it, but chawls provide a life which was very, very durable, and very, very low in terms of resource consumption. For example, chawl provides the best care. For older, people who are vulnerable. So, these dimensions of heritage of buildings, which were old, supported life forms in much cheaper ways and in ways which […] put together the community etc, that never became the argument for heritage conservation. Heritage conservation became about good-looking buildings and good-looking neighbourhoods." (Interviewee 22b, academic, 2021)

The statement shows that chawls, despite being built forms, did not get listed as heritage in the way other, more monumental built forms did, because of their presumed absence of value.

Figure 31: Representative image of community space in chawls

Photograph: urbzoo, CC BY 2.0, via Wikimedia Commons

Workplaces and livelihoods have also been affected. The difficulty in taking care of some of these impacts is acknowledged by the metro developers as well, some of whom despair at the absence of formal solutions available to them. A

representative from the Metro Rail Company cites the loss of livelihoods during the construction period, particularly felt by small shopkeepers. They note that if a shopkeeper is forced to move out temporarily during the construction period, when they come back, their former customers would have switched to other shopkeepers resulting in a loss of business for the returnee (Interviewee 10b, Metro Rail Company, 2022). Though the shopkeeper is monetarily compensated, the loss of clientele is unquantifiable and remains uncompensated (Interviewee 10b, 2022). The interviewee states:

> "So that factor, where and how to manage that, that I'm not able to understand.." (Interviewee 10b, Metro Rail Company, 2022).

In another case, the interviewee points to an area of the city, where no buildings are being touched but barricades have been installed. These result in shops being blocked. Here, in material terms the shop is unscathed, but the barricading could result in difficulty for customers trying to find the shop.

> "That shop-owner has lost that customer. And reaching that shop has become so difficult because that barricades have entry […] or punctures at certain locations only. So, [his] regular customer also may have gone down. So, this is an intangible fact where I'm not touching the shop, but a hindrance [created?] because of me is actually impacting his life and his income, and there I cannot […] do anything." (Interviewee 10b, Metro Rail Company, 2022)

This case highlights impacts from the construction period that could outlive it. In other cases, the impact, by way of resettlement and rehabilitation can be beneficial, as outlined by the interviewee. Some sellers benefit from the compensation they receive from the Metro Rail Company and are able to expand their businesses and also get more area for their houses or shops than they previously had (Interviewee 10b, Metro Rail Company, 2022). The interviewee also cites the examples of a banana seller and *paan* (betel leaf) seller, who got a better deal from the monetary compensation (Interviewee 10b, Metro Rail Company, 2021). The contrast in how people are affected is not lost on the interviewee:

> "[…] there's one example, where […] because it is within a legal framework, I'm telling him, ask for this, you will get it and this is better for you, and maybe that particular [banana seller] is getting not 100%, but 110%, he's getting more, whereas the person in [area previously mentioned] is losing and that I'm not able to capture it in a legal framework. And because it is not in a legal framework, I'm not able to offer anything to him." (Interviewee 10b, Metro Rail Company, 2022).

These responses reflect that many of the affected people fall in the cracks of a planning system that does not have the tools to deal with certain social impacts. The displacement of people for the construction of the metro is, as seen in media reports, part of a general pattern in infrastructure projects. (Ganapatye, 2018).

Religious built forms

Preservation is also sought for unlisted religious structures, as seen in the case of a 110-year-old cross, holy for the Catholic community, in the path of the metro construction. The Metro Rail Company relocated the cross by 20m after consultation with the community, represented by the Bombay Catholic Sabha (Council). Their original request was that the track be realigned, failing which the community was willing for the cross to be moved if it was done without hurting the sentiments of the community (Interviewee 24b, Bombay Catholic Sabha, 2022). The move of the cross was amicable (Interviewee 24b, 2022), and further, not seen to impact the religious value of the cross:

> "It was done in one piece. See, the sacredness is of the cross, sacredness is not the place where the cross was established. The sacredness continues wherever it is placed." (Interviewee 24b, Bombay Catholic Sabha, 2022)

The cross was moved with the offer of prayers at the former and new locations for its safe and secure relocation (Shelar, 2017; Interviewee 24b, Bombay Catholic Sabha, 2022).

Cases of religious buildings lying in metro routes are common. As a representative of the Regional Development Authority, states, unlisted religious buildings that come in the routes of metro projects are routinely demolished and rebuilt (Interviewee 12b, 2022). However, the concerned religious groups oppose demolition. This is seen across the board, whether the structures are temples, mosques, churches, or cemeteries (FPJ Bureau, 2019b; Interviewee 16b, Regional Development Authority, 2022; Phadke, 2012; D'Mello, 2009; Times News Network, 2019; Baliga, 2019). From the urban planning perspective, since these spaces are not codified as heritage, they are not considered to have heritage value. This is reflected in a Metro Rail Company representative's statement:

> "You see, heritage and religious issues are completely different. Why are you mixing both of them?" (Interviewee 11b, Metro Rail Company, 2022)

This differentiation in practice is in alignment with what Sharma (2012: 62) writes about the disjunct between conservation for professionals and for local

communities when it comes to religious sites. The former see heritage in physical fabric and historic, architectural, and/or aesthetic values, while the latter, in terms of spiritual values (Sharma, 2012: 62). In some cases, these two may align, as seen in the listed Parsi fire temples, but in the vast majority, they don't. Sharma (2012: 62) argues for the two types of values to be considered jointly.

To summarise the section, values attached to green areas, unlisted houses and workplaces, and religious built forms lie outside heritage and conservation considerations. This is emphasised by a member of the Municipality who states that those kinds of issues "are very far away from heritage, so [they] are not directly involved in that" (Interviewee 15b, Municipality, 2022). Nevertheless, as the examples show, civil society members still seek to preserve these values, regardless of whether the environments or objects are codified as heritage or not.

Overall, the chapter analyses the preservation of physical and visual integrity in the metro as being a reflection of the broader context of conservation in the planning system in Mumbai. The way that conservation and urban planning are institutionalised renders historic environments and urban planning projects as separated. This is seen in the way listed heritage is understood in the regulations and correspondingly, how Heritage Committee members, planners, and politicians seek to deal with conservation of listed heritage. The preservation of visual integrity of historic environments in the metro, as seen through the actions on DN Road, reveal a focus on aesthetics which is linked to colonial nostalgia from the heritage movements beginnings in Mumbai. Lastly, the chapter describes some instances of preservation of values that do not fall within the official planning framework, thereby revealing the presence of values attached to other material forms. Though compensation actions are absent in the metro and there is no provision for it in policy, individual actors express aspirations for conservation of historic environments that is change-oriented, flexible, and not restricted to built environments alone.

Chapter 9: Compensation through storytelling and storyreading in the West Link

Compensation for historic environment loss in the West Link takes the form of compensate-by-strengthening and compensate-by-creating, as analysed using the analytical tool developed, and shown in Figure 32.

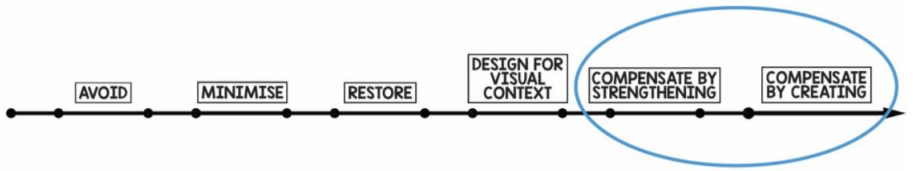

Figure 32: Compensation in the West Link

Diagram: Maitri Dore (2023)

Compensation can also be analysed through the intentions behind the actions, i.e., to convey "stories" about the historic environment. This is consistently emphasised by both sets of actors in their various action plans (STA, 2016a: 6; STA, 2023: 6; City Museum, 2017: 3; City Museum, 2018; 4). Stories are conveyed either through storytelling or "storyreading", a concept developed in the analysis. In storytelling, stories about the historic city are conveyed using interpretive tools. In storyreading, stories are conveyed using spatial tools.

The chapter consists of two sections, one each for analysing compensation as storytelling and storyreading. Storytelling however forms the bulk of the analysis.

Compensation as storytelling

Storytelling is analysed in four sub-sections: stories as historical information based on lost material; story selection; stories as visible and readable; and the scope of storytelling.

Stories as historical information based on lost material

The actors understand stories as historical information or factual knowledge about the past. The City's historic environment group speaks of stories in relation to knowledge about the historic environment (Interviewee 7a, CHEG, 2021; Interviewee 8a, CHEG, 2021). And as a representative of the STA states:

> "Compensation measures will increase my knowledge". (Interviewee 1a, STA, 2021b)

Stories as a form of knowledge are further attached to the physical historic environment. They are therefore seen to be lost with historic environment loss caused by the West Link. This is seen in the ways the actors refer to the stories in relation to the lost historical environment:

> "[…] if you take away parts of the physical wall, maybe the knowledge that we could, well, it goes away, and then maybe the immaterial stories and so on, goes away with it". (Interviewee 8a, CHEG, 2021)

The connection between stories and remains is echoed by Interviewee 7a (CHEG, 2021) who refers to the West Link as "digging away parts of history". For them, as long as there are physical remains underground, they offer the possibility of yielding knowledge, but once taken away, that is no longer possible (Interviewee 7a, CHEG, 2021). These ideas are in keeping with what Mason and Avrami (2002: 20-21) note about archaeological sites having an intrinsic capacity to convey historical information:

> "Cultural materials and artifacts of the past, one can say, have an inherent "story telling" capacity. In the case of archaeological sites, this is poignantly evident. As the legacy of a past civilization, as a collection of artifacts and settings with inherent narrative power, archaeological sites have an intrinsic potential for providing, among other things, historical information." (Mason and Avrami, 2002: 20-21)

This "inherent narrative power" of physical objects speaks to their research value, as defined by Mason and Avrami (2002: 16). This value is mobilised by the actors, as they choose parts of historical information as stories to make available. Accordingly, storytelling actions in the West Link aim to deal with the loss of historical environments. As one interviewee asks:

> "[…] how can we with the West Link tell part of the story that we in one way or another have destroyed?" (Interviewee 1a, STA, 2021a)

The various storytelling actions proposed, however, depend on differing degrees of loss. The STA gleans and conveys stories based on the specific ancient remains found during the excavations at specific sites.

> "A proposal for a cultural-historical framework has been developed which identifies the historical narrative deemed most relevant to each location. The story is linked to the knowledge that has been produced in the archaeological excavations at the site. Creating and working within a framework contributes to strengthening a certain story about the history of the place." (STA, 2023: 8, author's translation)

Dealing with the remains is enshrined in their legal mandate by way of Condition 1. This speaks of "making visible" and incorporating the found "ancient remains". The City's historic environment group on the other hand proposes storytelling actions based on the affected areas more generally; their reliance on the exact finds is limited.

Story selection

Stories are subsets of the entire breadth of historical information and different stories are told at different affected sites. As the STA (2023: 8) acknowledges, a site can hold several stories and their actions involve selection – for each site, a "certain story" is "identified" (STA, 2023: 8).

The stories are selected based on the lost physical parts of the national interest (Interviewee 1a, STA, 2020a; Interviewee 7a, CHEG, 2021; Interviewee 8a, CHEG, 2021). These areas, as identified by the P3 ruling, are:

- The moated fortified city of Gothenburg
- Skansen Lejonet tower/Gullberg hill
- The Kungsparken green area and the Nya Allén road within it
- Johanneberg landeri

These four sites are mobilised to tell two main stories, the fortified city story and the landeri story. Their centrality to storytelling is evident in the City Museum's action plans (2017; 2018) and substantiated by the actors (Interviewee 1a, STA, 2021b; Interviewee 7a, CHEG, 2021).

The *first* main story is that of the fortified city. This story largely covers the moated fortified city, but also draws on the Skansen Lejonet tower on Gullberg hill, and to an extent the Kungsparken green area which was built on the razed walls. The moated part of the fortified city began to be laid out in 1621 and demolition of the fortification walls began in 1807. Though the moated fortified

city forms only part of the national interest, it is considered extremely important to the national interest as a whole (STA, 2016a: 25; City Museum, 2017: 4).

The fortified city story captures the official birth of Gothenburg as a defence outpost and later trading centre. The chosen stories are the 17th and 18th century histories (STA, 2023: 15; 31; Interviewee 7a, CHEG, 2021; Interviewee 9a, CHEG, 2021). The fortified city story is considered pivotal to what the present-day city stands for:

> "Because the fortifications around the city is a great deal of what the birth of Gothenburg is. The beginning of Gothenburg is a fortified city. And that's why we are there. That's why the city's situation [is] where it is. And nowadays, a lot of those fortifications are very hard to read […] in the cityscape. So somehow […] that story, […] that narrative needs to go back into the city, is our idea" (Interviewee 9a, CHEG, 2021)

The story of the Skansen Lejonet tower forms part of the fortified city story. It was built in 1687 on Gullberg hill and together with its south-western counterpart Skansen Kronan was built to reinforce the moated fortified city. So, even though the tower physically lies outside the moated area of the fortified city, it connects to the fortified city story, as proposed by the actors (STA, 2016a: 25; City Museum, 2017: 19). The story at Skansen Lejonet will narrate the new information discovered based on the excavations there. This will be about the fortification history of Gullberg hill from the Middle Ages, before the official birth of Gothenburg (STA, 2023: 11; Interviewee 7a, CHEG, 2021; Interviewee 9a, CHEG, 2021).

The Kungsparken green area is the third area that forms part of the fortified city story. The park was built outside the moat on the fortification remains when the walls were razed in the 1800s. Accordingly, its story is connected to that of the fortifications and part of the actions proposed for the area (STA, 2016a: 26; City Museum, 2017: 4; 26; 2014: 3). The Kungsparken green area not only forms part of storytelling, by way of its connection to the moated fortified city, but also, to a great extent, part of storyreading. Its role in storyreading is discussed later in the chapter.

The *second* main story is that of the landeris, triggered by the physical impact on Johanneberg landeri. The landeris are former agricultural areas outside the fortified city that supplied produce to it after the city's official founding in 1621. They were laid out at the end of the 1700s but mostly built in the 1800s (City Museum, 2014: 13). The system started with the official birth of Gothenburg and were most active in the 1860s (City Museum, 2018: 4). The landeri story is conveyed both at the

scale of Johanneberg landeri as well as a collective landeri story. The stories in general concern the various people who lived on the landeri and its activities from the time (STA, 2023: 45; City Museum, 2018: 27). With respect to Johanneberg landeri the STA (2023: 49) suggest the narrative themes of "women's landeri", "Jewish landeri", "family structure", and "gardener".

The actors are aware of their role in the selection of stories. Interviewee 7a (CHEG, 2021) acknowledges that they sometimes find there to be an overemphasis on the birth of Gothenburg and its fortification history. However, they also see this as understandable in the light of the West Link affecting ancient remains from that particular period. Relatedly the actors point to other stories that are left out, ones unrelated to the birth of the fortified city, while physically in the same geographical area. These are the stories of the French Plot and the mass exodus to the USA (Interviewee 8a, CHEG, 2021; Interviewee 2a, STA, 2020). The French Plot, which now lies close to the construction of the West Link, was swapped with the French state in 1784, in exchange for the island of St. Bartholomew, a former French colony in the Caribbean (Det Gamla Göteborg, 2018). The French got trading privileges in Gothenburg and the Swedish state acquired a colony. Interviewee 8a (CHEG, 2021) mentions this plot as playing a role in Sweden's participation in the colonial slave trade and as a dark, less-discussed part of history (Interviewee 8a, CHEG, 2021). According to them, this story too should be told, as also the story of the mass emigration to the USA (Interviewee 8a, STA, 2021). Interviewee 2a (STA, 2020) too points to the Swedish exodus as a valid story to tell. The exodus played out in the former fortified city. As Interviewee 2a (STA, 2020) states, this area was the last thing the emigrants saw before travelling to a new country. One interviewee succinctly summarised the need to tell alternative stories than those of the fortifications:

> "So there are other stories, than just war with the Danes." (Interviewee 8a, CHEG, 2021)

According to Interviewee 8a (CHEG, 2021), these alternative stories are parts of history that are both important and interesting to work with when working in this geographical area. The selection of these alternative stories is part of an ongoing discussion within the City (Interviewee 8a, CHEG, 2021).

More generally, Interviewee 1a (STA, 2021a) acknowledges that stories are selected in the present and what is chosen may change in the future based on what people want to remember. To them, it is nevertheless important not to let go of the excluded stories completely and document the reasons for leaving them out,

for a day when those will be worth selecting (Interviewee 1a, STA, 2021a). The National Heritage Board also acknowledges that story selection affects historiography and who and which stories get included (National Heritage Board, 2015: 17). Accordingly, they argue for a high level of reflexivity from experts working with historic environments (National Heritage Board, 2015: 17).

Regardless of which stories are selected in the West Link, storytelling is for the people of Gothenburg and those who visit it (Interviewee 1a, STA, 2021b; Interviewee 2a, STA, 2020; Interviewee 7a, CHEG, 2021; Interviewee 8a, CHEG, 2021). The City Museum (2017: 5) also states that when the inhabitants were asked for ideas on how to celebrate the city's 400-year anniversary in 2021, many responded with a desire for its stories to be highlighted.

Stories as visible and readable

Compensation through storytelling is connected to the concepts of the "visibility" and "readability" of stories in space.

Visibility is enshrined in Condition 1, which asks that ancient remains be "made visible" or "synliggöras". In the STA's interpretation, "making visible" can be done at the location of the found remains or "by making the object or story visible in the new facility" (STA, 2016a: 12, author's translation). They enable visibility through their proposed actions exposing found objects, such as in Central and Haga Stations. There were similar plans for the built remains found on the eastern side at Skansen Lejonet, where they aimed to "[highlight] the history of the place […] by making that tower visible" (STA, 2023: 12, author's translation).

Making the stories visible is also considered in terms of other actions, not restricted to the excavated finds. These are seen in the City Museum's (2017) proposed actions for the fortified city, by way of reconstructing the former city gates and water barriers, for example. In reference to the fortified city, Interviewee 9a (CHEG, 2021) states, "the most important thing is that making the story visible" and Interviewee 7a (CHEG, 2020) refers to the fortifications needing to be "a visual part of the town". It is also seen in the restoration of the former park at Johanneberg landeri, to make it "visible again" (Interviewee 10a, CHEG, 2022). While both sets of actors stress visibility of stories, for the STA, visibility is linked to found objects, while for the City's historic environment group, it can also be linked to newly built objects.

Readability also forms part of storytelling for the City's historic environment group, largely in the context of the fortified city. They refer to the story of the

fortifications being "very hard to read in the cityscape" (Interviewee 9a, CHEG, 2021), and "hard to understand" (Interviewee 10a, CHEG, 2022). They propose actions to enhance the "understanding, readability and experience of the fortified city" (City Museum, 2017: 3). While the STA also references readability and the fortified city (STA, 2016a: 25; STA, 2023: 32), they do not propose specific actions to enable it.

Readability differs from visibility. Visibility can be interpreted as being at the scale of individual sites, while readability is about enabling connectivity between these individually visible stories. Both kick in in the context of the fortified city, which is geographically much larger than the other three sites. It contains individual sites within its geographical area, and represents a cohesive, self-contained story. The presence of multiple individual sites in physical proximity makes it possible to make them individually visible, as well as to connect them and tell one story. So visibility and readability work together in the fortified city.

The other three sites, i.e., the Skansen Lejonet tower, Kungsparken green area, and Johanneberg landeri, do not embody self-standing stories of their own, but plug into other stories. The Skansen Lejonet site is part of the fortified city story, Johanneberg landeri is part of the landeri story, and Kungsparken is both part of the fortified city story as well as the green heritage of Gothenburg. In the case of the landeri story and the green heritage story, they cover landeris and other green areas, respectively, that are far-flung from them (Interviewee 11a, CHEG, 2022). Connecting them is therefore untenable, while in the case of the fortified city story, it is more "manageable" in terms of area (Interviewee 11a, CHEG, 2022). Visibility therefore plays out at all the individual sites, while readability is only in the case of the fortified city and its story.

Scope of storytelling

Stories are told through physical compensation actions. This is in keeping with the P3 ruling that mandates "concrete measures". It is also how compensation is understood by the actors. The STA and City's historic environment group however differ on the scope of storytelling. This section analyses the differing scopes in two sub-sections: geographical scope of storytelling and art in storytelling.

Geographical scope of storytelling

The STA tells stories by connecting the four affected sites, while the City's historic environment group does so by connecting the four sites to other sites in the city.

The STA engages in storytelling at individual sites and create connections between these sites. The actions are geographically localised to the excavation sites and accordingly, involve exposing the ancient remains on-site or in the new station buildings. For them it is important to centre the stories of each of the sites locally, based on their history derived from excavations at the site (2023: 8). They make connections between the individual affected sites and their stories, by using the West Link route itself as a connector (Interviewee 2a, STA, 2020). Here the connection from Central Station to Haga Station to Korsvägen Station provides a new perspective of the city and acts like a "string of pearls" (Interviewee 2a, STA, 2020). They highlight the possibility of telling a new story by connecting the three stations, which would be like "taking the train to history" (Interviewee 2a, STA, 2020).

The City's historic environment group tells stories at a geographically larger scale, seeing the affected sites as a part of these. Their stories are independent of the West Link route. They leverage the affected sites to plug into the more overarching stories they want to tell. For them, the individual stories of the affected sites need to be connected to their respective larger stories rather than to other affected sites on the West Link. In their view, locating compensation measures only within the trajectory of the tunnel and in the stations is too narrow (Interviewee 11a, CHEG, 2022) and uninteresting (Interviewee 10a, CHEG, 2022).

> "[…] it's not enough. And it's not like the city's story just is situated exactly where the tunnel is. It doesn't work like that. So, if there is fortress remains around here, then the story to tell it then to show it […] is more interesting, maybe a little bit outside or to tell the story around certain spots […] and then it's very complicated if they only want to do it here and here. It's not so fulfilling for the city story." (Interviewee 10a, CHEG, 2022).

The City's historic environment group's views are seen in their plans for the fortified city and landeris. They see historic environment damage to be done outside the West Link route as well, and accordingly push for storytelling too outside the route. They connect the affected parts of the fortified city to the rest of the *fortified* city, and tell the story of the *whole* fortified city.

> From the City's point of view we claim that when damage is done to different sites in the fortress, that is not a damage done only in those particular parts, but it's also a damage done to the whole fortress, to the understanding of the heritage of the fortress as a whole. […] We want to see compensation measures not only site by site where the actual damage is done, but also measures that are relevant to understand the fortified city as a cohesive structure. This is an important part of the narrative and substantial to make it easier for people to understand the fortress as a whole. (Interviewee 7a, CHEG, 2020)

So the sites relevant for the fortified city story are not solely restricted to the sites of construction in the fortified city.

In the case of the landeris as well, the City's historic environment group sees the affected site of the Johanneberg landeri as part of a bigger landeri story despite its physical distance from some of the others, rather than in connection to other sites that are affected by the West Link. Johanneberg landeri is only one piece in the puzzle of the swathe of landeris in general, since they are spread across the city and the story needs to convey that the Johanneberg landeri was one of many (Interviewee 7a, CHEG, 2021). It is important therefore, to look at the "bigger picture about landeris and connect them somehow" (Interviewee 10a, CHEG, 2022). In the cases of both the fortified city and landeris, the proposals consider each of those in their totalities and at spatially larger scales than the excavation sites.

The differing geographical scopes of storytelling translate to differing extents to which the two actors rely on the ancient remains and to which their compensation actions are additive. The STA relies on found ancient remains and their reinterpretation to a large extent, which is in line with the Condition 1 mandate that focuses on the remains. Additions include signage to go with the remains and new design elements, such as patterns and text, in the station buildings. The City's historic environment group on the other hand largely seeks to tell stories through entirely new physical additions such as reconstructions, new programmes, and other tools that don't necessarily use the found remains. The differing scopes is exemplified by one interviewee's statement:

> "[The STA's] way of looking at this project is that they are building a tunnel, in the city. Whilst from the City's point of view, we are developing a city, that also has a tunnel in it." (Interviewee 7a, CHEG, 2020)

So even though the two sets of actors want to tell the same stories, they propose to do so at different locations and scales, and rely on newness to different degrees.

For the STA, the stories are attached more closely to the specific physical loss, while, for the City's historic environment group, they are attached to the sites that the West Link affects more generally. Accordingly, the STA tells the fortified city story at Skansen Lejonet and Central and Haga Stations (STA, 2023), and the landeri story at Korsvägen Station (STA, 2023). The City's historic environment group tells these stories outside the station buildings and the West Link route as well. Overall, the STA sees the four affected sites together as one whole, while the City's historic environment group sees four sites that are part of or relate to other wholes, at the city scale.

Art in storytelling

Art as an expression of stories elicits conflicting opinions. The STA (2016a: 23) considers art as a means of compensating for the physical loss of the historic environment. This is seen in their actions at Central Station, wherein the art landscape engages in telling stories about the people who built the fortified city (STA, 2023: 15). They display stones with visible hand imprints to invoke the story of the toil of the labourers who built the city (STA, 2023: 16). Further, the work is located such that it is close to one of the bastions (STA, 2023: 16). The art also conceptually connects to the passage of time:

> "In this current context they have one purpose, in its previous one, another, and based on the material's lifespan they may have additional uses in the future." (STA, 2023: 18, author's translation)

The STA sees the work as an entanglement of art and cultural heritage (Interviewee 1a, STA, 2021b; Interviewee 3a, STA, 2022). It calls upon viewers to think more about its meaning rather than simply reading a text (Interviewee 3a, STA, 2022). In this way, while it tells stories, it does so conceptually and indirectly.

The actors view this compensation action differently. For the STA, the stones at Central Station engage in storytelling since they reference cultural history (Interviewee 1a, STA, 2021b; Interviewee 4a, STA, 2022). For the City's historic environment group, despite the connection to the historic environment, the work is still art alone and not valid as compensation (Interviewee 7a, CHEG, 2021; Interviewee 8a, CHEG, 2021; Interviewee 9a, CHEG, 2021). It is interpretative and different from compensation for historic environment loss (Interviewee 7a, CHEG, 2021; Interviewee 9a, CHEG, 2021). So, art in storytelling is a matter of debate.

The differences of opinion on art as compensation are possibly because the actors have different expectations for the degree of directness in storytelling. All the other actions engage in direct storytelling, i.e., conveying information through displaying objects with signage, walking tours, maps, and so on. These actions mobilise the affected historic environment's "research" values (Mason and Avrami, 2002). Art, on the other hand, is indirect in its storytelling. The art at Central Station draws less on the research values of the stones, and more on its "artistic" values (Mason and Avrami, 2002). This is seen in their artistic reinterpretation. Since it is indirect in storytelling, it does not embody compensation for some of the actors. This points to the difference in opinion on the extent of directness required in storytelling, when storytelling is the chosen strategy of compensating for historic environment loss.

Overall, the scope of storytelling in the West Link, as proposed by the two actors, has been previously analysed using Grahn Danielson et al's (2013: 8) matrix of values and site (Dore, 2022: 107). This is seen in Figure 33.

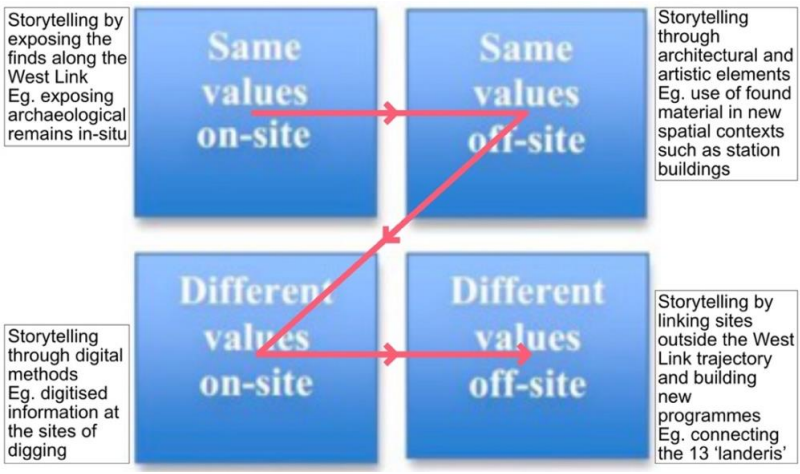

Figure 33: Storytelling mapped on Grahn Danielson et al.'s (2013: 8) matrix

Source: Dore (2022: 107)

The use of this matrix however presents problems for sorting the actions because it does not consider variations in type or scale. For example, videos in Korsvägen Station to compensate for lost ancient remains, would, with the landeri plan, count as being in the bottom right quadrant of different-value-off-site. However, there are differences between these two actions. While both are creative and off-site, the

videos are much smaller in scale and localised as compared to the landeri plan. The model does not account for variations in degree of "differentness" and "off-sitedness".

Compensation as storyreading

Storyreading seeks to re-create lost historical spatial connections and add new historically relevant elements and spaces. In this way it aims to convey stories through spatial layout or planning measures. It is discussed and elaborated on in this section with respect to the Kungsparken green area. The section is divided into three sub-sections: story as historic plan; loss of spatial connections and functionality; and scope of storyreading.

Story as historical plan

The story of Kungsparken exists in the historical layout of its trees and green spaces. Storyreading connotes compensation actions that restore this layout, rendering it readable in space. These actions are jointly worked on by both actors.

Kungsparken in Haga was laid out in the late 1850s in the style of an English landscape park. This format of city park design entailed free flowing areas, breaking out of the earlier rigid landscape designs (City Museum, 2014: 11), and was composed of areas with clusters of trees and other vegetation, affording spaces for rest and recreation (City Museum, 2014: 11). Such parks had an amorphous layout, that in the urban setting, took on an aesthetically pleasing character, described as a landscape painting (City Museum, 2014: 11). In general, the English landscape park could be laid with exotic or distinctive trees, winding paths, well-considered placement of statues, and compositional views (City Museum, 2014: 11). It was a "living painting" (City Museum, 2014: 11).

The importance of Kungsparken as a valuable historic environment is emphasised by both the actors. They variously mention its experiential qualities, historical value, and "character of antiquity" (STA, 2016c: 6-7). They also mention the significance of the views, sightlines, and avenues that contribute to the park's character (Interviewee 12a, CHEG, 2022). This pinpoints the distinctly historical value of the park and its historical layout as its story.

Loss of spatial connections and functionality

The loss of quality of Kungsparken is the result of both the West Link, as well as incremental encroachments and interventions in the area over time.

The West Link construction results in the loss of many trees and green areas. Some of the trees are the original ones from the 1800s (City Museum, 2014: 5). Physical loss of the historic environment renders loss in spatial comprehension, "character", and "identity" (Interviewee 12a, CHEG, 2022). The loss of trees makes the park boundary unclear (City Museum, 2014: 7) and even with replanting, something of the character will be lost because the area will be flat and open and unsupported by "mature, space-forming trees" (City Museum, 2014: 7, author's translation). The project also results in a "weakening" of the spatial connection between Kungsparken and the Haga church plan (STA, 2016c: 13; City Museum, 2014: 7).

The City's historic environment group further mentions the incremental loss in the park space and experience of Kungsparken over the years. This is caused by exhaust, noise, and disruption of its views due to increasing car traffic (City Museum, 2014: 12). Traffic too has driven a wedge between two areas of the park (City Museum, 2014: 7). In general, not only is the spatiality weakened but also the function as a park, as a place for recreation, meeting, and "to see people and be seen" (Interviewee 11a, CHEG, 2022).

Scope of storyreading

Storyreading in Kungsparken is aimed at re-creating old spaces and adding new ones, in response to lost spatial connections and functionality caused by the West Link. The corresponding compensation actions are additive, in that they introduce new elements that are reminiscent of the 1850s park, as well as create new functional spaces in sync with the historical ones. Additions include historical benches and gravel for the paths, as well as the creation of a new park in the Pusterviksplatsen area. The new park is an attempt to make it "easier to understand the rest of the park" (Interviewee 11a, CHEG, 2022).

The importance of additive actions is seen in the aspirations for the park to not only be "as strong and clear" as before the work, but "preferably be perceived as stronger and the experience of the park as a cohesive unit should be stronger" (City Museum, 2014: 3, author's translation). Both the STA (2016b: 13) and the City Museum (2014: 14-15) point to the significance of historically sensitive additions.

Restoration of trees to their former locations also helps in the re-creation of the park's historic environment by way of restoring it to its pre-West Link condition. However, it is not a compensation action because it is not additive in any way. It does not, independently, fulfil the aims of making the park "stronger" than what it was before construction. So, while it *supports* storyreading, it does not constitute it.

With restoration of trees there is an overlap in the ways that compensation for natural value loss and compensation for historic value loss are dealt with. In general, restoring trees to their former locations is part of policy that deals with compensation for the loss of natural values of the environment. It lies on the third step of the damage mitigation hierarchy, wherein compensation is the re-creation of the same values on the same site (NBHPB, 2018; Gothenburg City, 2008; Gothenburg City, n.d.). In Kungsparken, this action helps restore *historic environment* values of the park, by helping re-establish sightlines and avenues. As Interviewee 12a (CHEG, 2022) acknowledges, the principles of Gothenburg City's (2008; n.d.) natural environment compensation policy collaborate with compensation for loss of historic values in Kungsparken. Here, the tools for compensating for natural value loss are used to compensate for historic value loss.

Storyreading in Kungsparken is premised on re-creating and adding to the historical layout and not on re-creating the value of individually unique trees, of which there are several. As Interviewee 11a (CHEG, 2022) states, these trees are "personal trees". In these cases, storyreading is not applicable because the value of trees is not in their spatiality. Their historic and cultural value cannot be replaced by new trees.

> "If you look at it strictly biologically, yes, I think it can be exactly the same [if the trees come back to the same spot]. But we've also done like cultural evaluation of the trees as well. Because a tree that's been situated in an exposed spot for a long time is maybe something more, like a special building, something for people in the city, something that they've seen every morning that they stand and wait for the tram or something, it's like a landmark." (Interviewee 11a, CHEG, 2022).

These trees, according to the interviewee, resemble historic environments in their uniqueness, making them comparable to historical or cultural objects. The implication is that historic environments are always unique. Replacing one old and significant tree with brand new trees "creates something else and does not have the same story and character as the old tree" (Interviewee 10a, CHEG, 2022). Interviewee 12a (CHEG, 2022) too draws parallels between the irreplaceability of

cultural objects and particularly special trees that hold stories and memories for people. Such trees are more than their natural values, by way of "green structure" (Interviewee 12a, CHEG, 2022). So storyreading as a response, compensates for loss of historic values associated with the compositional elements of a space, but cannot work for individually valuable entities.

More generally, the premise of storyreading is in alignment with Nilsson's (2020; 2022) understanding of compensation, which is through architectural design and planning. He views spatial planning as having the potential to convey history through appropriate design, placement, materials, signage, as well as reconstruction of historical features.

Overall, this chapter shows that compensation can take the form of additive actions aimed at conveying stories, either through storytelling or storyreading. Storytelling is the conveying of stories, understood as a selection of historical information based on physical loss of historic environments and objects. While the actors in the West Link agree on the stories to be told, they differ on the desired geographical scope, scale, and nature of some of the actions. Storyreading too is the conveying of stories, though the story constitutes historical layout. It is based on loss of spatial comprehension and involves re-creation of the same through trees and green areas. Both storytelling and storyreading are aimed at compensating for the loss of historic environment values.

Chapter 10: Contextualising the preservation and compensation responses

This thesis started with an understanding of conservation as the negotiation of historic environment values in planning, and as a people-oriented process. Accordingly, this chapter analyses preservation in the Mumbai Metro and compensation in the West Link in the context of two central themes: planning frameworks and authorised views on heritage.

The chapter is divided into two sections. The first section analyses how conservation and urban planning meet in the planning process to spawn the preservation and compensation responses. It uses Ashworth's (2011) three paradigms, referred to as discourses, as a framework for the analysis. The second section discusses the ways in which the emergent responses, in both process and outcome, express and subvert authorised views on historic environments and their conservation.

Conservation and planning

The responses in the cases are results of complex entanglements with institutional mandates, regulations, the roles of the actors, and approaches to heritage. In both cases, the urban planning projects present a tension between transportation needs and historic environment conservation, however conservation may be understood.

This section analyses the preservation and compensation responses in the cases through Ashworth's (2011) three discourses: the preservation, conservation, and heritage discourses. The discourses are overlapping and criss-crossing across the cases, though the dominant discourse in the Mumbai Metro is preservation, and in the West Link, it is conservation. The rest of this section looks at the three discourses more closely, with one sub-section for each.

Preservation discourse

The preservation discourse (Ashworth, 2011) has its focus on material preservation and resistance to historic environment change. This is expressed in the Mumbai Metro through the preservation of the structural and physical integrity of the historic environment. This discourse considers historic environments objectively valuable, which results in the separation of conservation and urban planning. The confrontation between these two goals is strong, with the historic environment and the new project acquiring hardened positions. To use Ashworth's (1991) heritage planning schema, this means that "built environment" and "uses" – which collectively connote conservation – overlap with each other, but not with "area strategies", i.e., urban planning. So, as depicted in Figure 34, in the Mumbai Metro case, conservation and planning are detached.

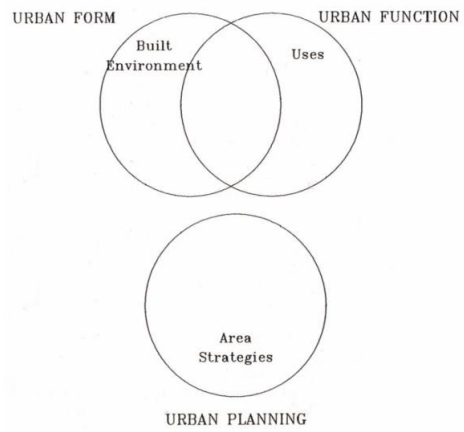

Figure 34: Separation of conservation and urban planning

Diagram: Maitri Dore (2023), based on Ashworth's (1991: 3) diagram

Negotiation of values in the Mumbai Metro takes the form of deciphering how best to preserve the physical historic environment. Conservation is then less about the management of change and more about the resistance to it. This means that the two imperatives of conservation and urban planning are dealt with independent of one another. Both the historic environment, by way of "heritage buildings and precincts", as well as the contemporary city, by way of the metro, are nurtured, but without contributing to, or engaging with, one another. The positions of the conservationists and urban developers are divided and largely stay within their individual mandates. This approach also reflects what Janssen et al.

(2017) refer to as heritage-as-a-sector, wherein the historic environment is separated from spatial planning, rather than being used as a resource in it.

The preservation discourse in the metro case draws its legitimacy from institutional and legal mandates. These are further embedded in the historical context of how conservation and urban planning came to be adopted in India. Both conservation and formal urban planning were introduced by the colonial government and persist in some or other shape. Conservation was formally introduced with the establishment of the Archaeological Survey of India (ASI) in 1861, which undertook protection of nationally important monuments. Around the same time, formal planning was also introduced by the colonisers (Menon, 2017a: 36). Colonial mores of both conservation and planning persist in contemporary India (Thakur, 2012; Intach, 2004, Menon, 2003; Menon, 1997). In the case of conservation, this means a focus on monuments. In the case of planning, Menon (2017: 37) writes:

> "[…] contemporary Indian urban planners ape the colonial British in the original desire to protect their empire by disciplining the native urban space and punishing its 'disorderly' manifestations which were assumed to be the expressions of a rebellious populace. So deeply embedded is this punitive vision, that the notion of a planning model that mediates and facilitates the process of urbanisation and that is sensitive to the needs of vast swathes of disadvantaged inhabitants becomes tragically inconceivable." (Menon, 2017a: 37)

Urban planning not only retains vestiges of its colonial form, but planners also aspire to contemporary modernist models from the east (Menon, 2019). The result is a systemic wedge between conservation and urban planning. In this situation, conservation is viewed through the lens of loss where "any sort of new condition [is considered] as worse than some 'magic moment' in the past" (Mehrotra, 2007: 347).

The idea of preservation in India was imported through colonisation, but its trajectory has been very different from that of the former coloniser. Conservation in policy in contemporary Britain is a consensus (Pendlebury, 2008). Its virtues and desirability are taken for granted and are largely non-negotiable. Deviations from the consensus are hardly fundamental but rather "surface noise" (Pendlebury, 2008: 1). The state of conservation in Mumbai and India, however, show that it is not only the modalities or "surface noise" being discussed. Conservation is a nascent discipline, still trying to establish the "fundamental rules" (Mehrotra, 2007: 349). This is seen in the Development Control and Promotion Regulations

(DCPR, 2018). Following recent dilution, the regulations increased the scope of permissible changes to listed buildings, reflecting shrinking space for material preservation. The fledgling state of conservation policy further means that there is little room for "conjecture and strategy which might employ subjective interpretations" (Mehrotra, 2007: 349). As the regulations (DPCR, 2018) show, there is no space in policy for productive ways of thinking about historic environments. The scope for changes through the three grades cover avoiding damage, minimising it through various types of alterations, and demolition altogether. The space between minimising and demolishing, that compensation-like actions could potentially inhabit, is lacking in current planning policy. Within the options available, conservationists in turn must battle for material preservation of even listed historic environments. So, on the one hand the preservation discourse has a hold on conservation practice and policy in India, and on the other, it is still inchoate.

The preservation discourse is also present in the compensation response, in the West Link, however to a lesser degree. Here, it takes the form of individual actions to avoid and minimise loss of historic environments and objects. These actions do not form the dominant response, i.e., compensation, but rather feed into it. Such actions are seen at individual locations – excavated objects, the tower at Skansen Lejonet, and trees at Kungsparken. The actions, while focusing on material preservation in their specific locations, are part of a larger strategy.

Conservation discourse

The compensation response in the West Link reflects a wider view of historic environments and ways of dealing with them outside material preservation. It is an expression of the conservation discourse. This discourse considers value in functions and enables integration between historic environments and future plans (Ashworth, 2011). The Mumbai Metro also expresses a conservation discourse in some ways, largely through the process of planning, rather than the actionable outcomes.

Conservation, understood in the broad sense, is firmly in planning practice and regulated by laws and policy. In the Mumbai Metro case, it is seen in the role of the Heritage Committee within the Development Plan Department of the Urban Development Department of the state, and its mandate to approve building permissions in areas of listed heritage. The List is also an institutional mechanism to regulate conservation, and planners are bound by regulations to consider listed

historic environments that the projects might encounter. So even though the physical response is largely within the preservation discourse, it still emerges from a planning policy context.

In the West Link, conservation professionals at local, regional, and national levels form part of the planning process. There are further special legal instruments geared towards compensation, instated as part of this process. The West Link's emphasis on the integration of conservation and planning is systemic, seeing as compensation draws its legitimacy from institutional and legal mandates. The response reflects an integration of conservation goals and urban planning goals. The twin goals are mediated by trying to find an optimal resolution, through negotiation of values, in that damage is attempted to be worked with, rather than stalled. The negotiation of values is reflective of what Janssen et al. (2017) refer to as heritage-as-a-factor in spatial planning. In this view, historic environments are only one of the many 'factors' that go into creating a place (Janssen et al., 2017: 1661). In responding to the urban planning project with compensation, the case is an example of heritage planning's ambition of achieving an overlap between built environment, uses, and area strategies, as laid out by Ashworth (1991).

There is further, a wide range of interests and considerations that go into conservation, however it may be understood, and there is a need for mediation between them. Short (2020: 223) refers to conservation planning as a deeply political and multi-scaled process wherein various different groups jostle to execute their individual visions. Given the multiplicity of actors, constraints are baked into the process, and mediation is not always easy.

The negotiary nature of planning is seen in the cases irrespective of what kind of physical responses emerge. The responses are the results of discussions and other external factors and not necessarily reflective of fast held attitudes of individual actors. The preservation response in the Mumbai Metro emerges in a context of difficulties in acquisition of land, tunnelling through congested pockets of the city, legal tussles, changes in government, and time and budgetary constraints, to name a few. The range of actors covers not only planners and conservationists, but also various architects, consultants, other departments in the city, and even the judicial system.

The compensation response in the West Link emerges in a context of a strict legal framework, absence of adequate guidelines for compensation, financial issues, other allied projects on those sites, communication difficulties, land ownership and access, and more. In this case too, the range of actors is wide. There are not only the planners and representatives of the City's historic environment

group, but also other City departments, entrepreneurs, and a range of architects, artists, and consultants. In the absence of adequate guidelines, compensation is also highly interpretative. This is seen in the differing understandings of the task by the Swedish Transport and the City's historic environment group. This produces misunderstanding and challenges to communication, which have been well-documented by Fredholm et al. (2019). The conflicts that arise in the interpretation of the word and concept are in keeping with what Rönn et al. (2020) write about compensation being an "essentially contested concept".

The work with the historic environment exists in relation to a number of other needs and processes when it comes to large urban planning projects. The cases comprise a number of moving parts, and their planning and implementation span decades which leads to further unpredictability and difficulty in making workable plans. All of these constraints and considerations coalesce to spawn the emergent response, whether it crystallises as preservation or compensation. Even the preservation response, where conservation and urban planning work in silos, emerges from a highly knotty planning process. Overall, the cases reflect the deep dependence of conservation planning on various factors that it cannot control (Short, 2020: 223).

Negotiation in planning has itself been characterised as compensation (Rönn, 2020). The rationale is that the back-and-forth between institutional actors leads to area plans being revised and even enriched, which makes for smoother execution of the plan. In this view, the preservation response in the metro would also count as compensation, simply by virtue of the discussions between the conservationists and metro developers. This understanding of compensation is however inadequate. It largely focuses on making the plan implementable, and excludes the intent behind compensation actions, which is to add value to the historic environment.

Compensation as an outcome in the West Link results in additive actions intended towards storytelling or storyreading, which are to varying degrees spread over wider areas. The response is in alignment with the conservation discourse despite some individual measures embodying material preservation. This is in keeping with how Ashworth (2011) differentiates the conservation and preservation discourses, i.e., by their intentions rather than actions. Compensation, with its wider planning strategies and additive actions attempts to manage loss. It reflects the possibility for conservation and urban planning to meet in dynamic, productive ways.

Heritage discourse

The heritage discourse (Ashworth, 2011) plays out in the cases largely through the actors' aspirations to work in ways that consider contemporary needs and users. They think outside of the preservation and conservation discourses by considering conservation in a wider context, whether social or economic. In this way, they push for a shift in thinking of heritage from solely material to people-centred and linked to contemporary needs.

Actors in the Mumbai Metro emphasise the need for conservation of historic environments to be made relevant to economic and social needs. Actors in the West Link consider telling stories that don't directly sit within their institutional mandate. The compensation response further has elements that focus on functionality and creation. This is seen in the introduction of new spatial programmes that both draw on history and also consider contemporary needs, such as the proposed park at Pusterviksplatsen. In this case, a new resource is created, rather than an already preserved resource being used for a new purpose. Conservation that is creative is in line with Janssen et al.'s (2017) heritage-as-a-vector approach in spatial planning. Here, the historic environment becomes an active agent in contributing to urban planning. This approach shifts the focus of conservation from loss to gain (Janssen et al., 2017: 1658).

Despite actors acknowledging the limitations of the preservation and conservation discourses, the heritage discourse is present in the two conservation responses to a very limited extent. This is also a product of systemic constraints that favour preservation or compensation, as the case may be.

Overall, the three discourses are present in the cases to varying degrees and overlap with one another. This is in keeping with what Ashworth (2011) calls an incomplete paradigm shift. Similarly, Janssen et al. (2017) refer to the presence and necessity of a mixed bag of approaches to conservation today, so that context-specific choices of approaches can be deployed.

The three discourses can also be characterised through the lens of resistance, negotiation, and creation in the face of change. The preservation discourse is based in resistance to change, the conservation discourse plays out as a negotiation over historic environment values, and the heritage discourse is expressed through actively working with creation. All the discourses consider the historic environments, however, with different attitudes to their loss.

Authorised views on historic environments

Authorised views on conserving historic environments are expressed and subverted in the cases in various ways. These views, to varying degrees, exclude non-institutional, unofficial voices and types of environments, view heritage as a thing of the past, and ignore the active selection process involved in its creation. Authorised views on the historic environment are built into the institutional frameworks of the cases and allow for limited reinterpretation by the individual actors. They are further mediated by other factors that go into planning.

This section looks at authorised views on the historic environment through two sub-sections: role of experts; and selection of values. It also highlights resistances within these themes. The analysis uses Smith's (2006) conceptualisation of the Authorised Heritage Discourse (AHD) as a starting point, however, draws from the work of a number of other authors to flesh them out.

Role of experts

Heritage experts have a significant role in decision-making in both the cases. Experts are educated professionals, having competence in fields such as archaeology, history, and architecture, when it comes to defining the meaning of heritage (Smith, 2006: 51).

In the Mumbai Metro, these categories of professionals, as well as structural engineers form the expert group. They are all related in some or other way to the physical characteristics of the historic environment. Expert dominance is however uneven. This is for two reasons. On the one hand, the experts, being nominated members of the Heritage Committee, have their own multiple roles outside that of the Heritage Committee. Secondly, while they weigh in on conservation decisions, they are not the only participants and arbiters of the emergent response, i.e., preservation. They liaise with current and former members from the administration who also form part of the committee, and other types of experts such as planners. In general, though they have a seat at the table, they often assume an activist role as they militate against the administrative machinery or governmental strictures that they view as favouring the real estate sector. Despite working within the institutional framework of conservation, as members of civil society, they push for the strengthening of conservation policy by the government. In this way, they have a double role.

In the West Link, heritage experts play a strong and decisive role in conservation – it is mainly heritage professionals and consulting architects behind

the compensation response. Their work with compensation stems from a legal mandate and deals with working out the details of compensation alone, unrelated to technicalities, such as the routing of the track, which are already fixed. Here too, while heritage experts make decisions on conservation, they have different starting points, as seen in the differences in the compensation actions put forth by the Swedish Transport Administration (STA) and the City's historic environment group. These differences stem from the different mandates of the two authorities. The STA is concerned with the historic environment in relation to building the infrastructure project, while the City's historic environment group is concerned with the historic environment in relation to planning the city more generally. So even within the dominance of heritage expertise, the roles assumed by individual actors depend on their institutional mandates within the planning process.

Non-experts and the lay public have a potential role in decisions around the historic environment by way of public consultations, which are also baked into the planning process by law. In the Mumbai Metro, this takes the form of informing the public about the project and understanding their grievances related to land acquisition and resettlement caused by the project (Rites and MMRCL, 2012: 31). In the West Link, it is in the form of "deltagande" or public participation. The case has however been critiqued for lack of adequate public participation (Ekberg, 2018: 5; Fredholm et al., 2019: 10). The inclusion of non-experts in planning raises the relevance of "dialogical" interpretation of the historic environment, wherein heritage is created through meaningful dialogue and interaction among a range of subjects (Harrison, 2013: 217). Despite policy objectives that embody these ambitions, when it comes to conservation of historic environments in planning, participation processes have various constraints (Weijmer, 2019). Overall, experts continue to be the ones who interpret the historic environment (Weijmer, 2019; Fredholm, 2017), even as their roles and the emergent conservation responses are muddied by other factors that go into the planning process.

Selection of values

Conservation of historic environments involves the identification and selection of its values. The selected values in the responses in the cases are collectively historic, artistic, and research values, to use Mason and Avrami's (2002: 16-17) terminology. In the Mumbai Metro, historic and artistic values dominate, and are expressed through physical and visual preservation. In the West Link, research value dominates, and is expressed through compensation. These values reside in the

innate material qualities of the historic environment, either by way of its age or historical association, its aesthetic qualities, or potential to yield historical knowledge (Mason and Avrami, 2002: 16-17). These values are exemplary of "heritage values" (Mason, 2008: 305), whose focus is on the physical historic environment. In Smith's (2006) conceptualisation of the Authorised Heritage Discourse, this focus reduces heritage to a "thing". It relegates heritage to an object or environment of the past, to the potential exclusion of contemporary uses and users (Smith, 2006: 12). It further defers to "experts" on the interpretation of historic environments, consolidating their authority to speak for the material (Smith, 2006: 12). Instead, Smith (2006: 2) and Harrison (2013: 4) assert that heritage is actually dynamic and a process of active engagement with the past in the present. For Smith (2006: 3), all heritage is intangible, which means that historic environments do not carry in-built value. Accordingly, she critiques the emphasis given to sites based on their age, monumentality, or aesthetics (Smith, 2006: 3). Values further require constant interrogation in order to serve contemporary needs (Harrison, 2013: 199).

The preservation of historic and aesthetic values in the Mumbai Metro is in line with the Venice Charter that prioritises these values (Larsen, 1994: 22; Smith, 2006: 91). The Venice Charter legitimises these values as innate, universal, and obvious, and puts expert knowledge on a pedestal (Smith, 2006: 90-91). The Venice Charter, and charters more generally, are tools to wield authority. Further, in the Indian context, international aid is contingent on accepting the charter (Menon, 2003). This shows that authorised views produced and perpetuated in an international context are further reproduced within local conservation practices as seen in the metro.

Compensation as storytelling in the West Link draws on the research values of the historic environment. It involves the interpretation of the environment and packaging of its research value into stories that are "readable" and "visible". This interpretation is a means to make the historic environment "legible" or imbue it with the ability to convey meaning (Muñoz-Viñas, 2005: 99). According to Muñoz-Viñas (2005: 99), the notion that material has meaning rather than being important solely in and of itself is a move away from a classical view on historic objects to a more contemporary one. Yet, given that meaning is obscured by damage, this position still retains its classical, material-focused avatar to a large extent (Muñoz-Viñas, 2005: 99).

Compensation entails interpretation of the historic environment. And interpretation is a selection from history. As authors point out, history is far from

straightforward. It may aspire to be a truthful record of past events (Lowenthal, 1998), however, it is transformed by the interpretation process into a reflection of what contemporary society values and chooses to bequeath (Tunbridge and Ashworth, 1996: 6). The contortion of history is heritage and can be deployed to serve nationalist goals, cement group identities, and sanction myths (Lowenthal, 1998). Stone (2020: 79) takes this further by problematising the basis of history itself, arguing that it is entirely positional and based on the narrator's interpretation. Further, story selection can be wielded as a tool of power. As Muñoz-Viñas (2005: 100) writes, there is an underlying assumption that a correct interpretation exists and can be rendered available by an expert, which in the case of objects is a conservator. The selection of certain parts of history perforce involves the deselection of others. In this way, some interpretations or legibilities prevail over others, risking certain meanings being permanently excluded (Muñoz-Viñas, 2005: 100). Interpretation, as a result, engenders dissonance (Tunbridge and Ashworth, 1996: 21), which as the authors state is inevitable. Where one story is told, another is perforce left out, resulting in the disinheritance of some groups (Ashworth and Tunbridge, 1996: 30-31). Smith (2006: 80) too asserts that depending on how the physical material is interpreted, the process can be disabling for those left out of the authorised, dominant selection (Smith, 2006: 80) or the "consensus view of history" (Smith, 2006: 306). For Smith (2006: 11) the dominant selection within the Authorised Heritage Discourse largely revolves around narratives of the nation.

Authorised views are subverted by resistance from actors both within and outside the planning system. Institutional actors in both the cases variously reflect on their role in the chosen responses and planning system more generally, and also despair at the absence of formal tools to deal with the more intangible aspects of the historic environment. Non-institutional actors unconsciously resist the way value is ascribed to environments by rallying around to preserve what they consider valuable. In these cases, the objects of attachment fall outside the official historic environment designation. Values ascribed to unlisted living spaces, religious buildings and objects, trees, and green areas, helps identify the presence of an "unofficial heritage". Unofficial heritage refers to spaces and practices that do not enjoy legislative protections (Harrison, 2013: 15). The "unofficial heritage" shows the limits of conservation in planning, where not all environments of value merit conservation.

Overall, the values selected in the process hew close to having a material focus. The selection of research value, however, is less material focused than historic or

artistic values. It is mobilised in compensation through storytelling. The selection of values nevertheless remains an expert activity within the planning process.

To summarise, conservation operates within legal and institutional planning frameworks. The conservation responses, whether preservation or compensation, emerge from a push-pull between a range of factors. These include various actors, their institutional mandates and regulations, as well as the constraints associated with these. The responses also embody authorised views by way of expert decision-making, and selection and exclusion of certain values, which too are mediated by the institutional frameworks in which they are embedded.

Compensation as storytelling exemplifies the transmission of authorised views to some extent. It involves interpretation of historic environments, by way of their research value, by experts, and a selection from history in the process of telling stories. Nevertheless, it is a move away from traditional material preservation. It is additive, emerges from negotiation of values rather than resistance to loss, and offers a dynamic alternative to managing change in the face of urban planning projects.

Chapter 11: Letting go and beyond

Compensation is a response to the loss of historic environments from urban planning projects in additive and productive ways. To develop the concept of compensation further is to then ask what other forms of dealing with loss it can take. Letting go of historic environments altogether is one such exploration.

This chapter explores letting-go as a form of compensation. The chapter is divided into three sections. The first section discusses the intersections of letting-go and historic environment loss in theory. The second section contextualises letting-go within planning practice. The third section is the final section of this chapter, as well as of the thesis. It summarises the overall findings and offers concluding remarks on the thesis.

Letting go

Letting-go shifts conservation thinking from holding on to historic environments to relinquishing them altogether. In order to explore whether letting go of historic environments can be a form of compensation, it is essential to first understand its theoretical premises.

This section discusses letting-go in theory in two sub-sections. The first sub-section focuses on letting-go as a response to loss through relinquishment of historic environments. This theory largely emerges from western critical heritage studies. This discussion draws primarily from the work of DeSilvey (2007) and Holtorf (2015). The second sub-section focuses on letting go of historic environments as loss itself, through building practices and traditions associated with historic environments. The discussion focuses on pre-colonial practices in the Indian context with some discussion on craft conservation in the Nordic context.

Letting-go as a response to loss

Letting-go through relinquishing material is premised on loss to historic environments having the potential to engender positive outcomes. This thinking pushes for an embrace of impermanence of historic environments and views change as productive. It stresses the productive outcomes that loss of material can

bring when the focus shifts from what is lost to what is gained (DeSilvey et al., 2021: 3).

Strategic letting go of historic environments can spawn "new values, attachments and forms of significance" (DeSilvey and Harrison, 2020: 3). Accordingly, historic environments are not equivalent to the value they hold for people. Holtorf (2015: 408) suggests that values can exist independent of being attached to physical material. This is because they are dependent on the social and cultural context in which the historic environment was produced, and not the environment itself (Holtorf, 2015). In this view, historic environments can be potentially interchanged while maintaining their value (Holtorf, 2015: 408). One example of increase in values is that of a 12th century Norwegian stave church (Holtorf, 2015: 413). It was burnt to the ground in 2012 by a non-believer heavy metal fan. What followed the loss of the historic site was a renewed religious interest from practising Christians (and consequent rebuilding of the church), the site becoming important for heavy metal fans, as well as engagement in stave church preservation by the authorities (Holtorf, 2015: 413). To Holtorf (2015: 413) this is an example of values, memory, and function persisting and even growing despite loss and change to the historic environment. DeSilvey (2017: 13) too questions the presumed connection between material and memory and the role of material as a crutch for remembering (DeSilvey, 2017: 13). These views point to an understanding of value being in constant flux rather than inherent to historic environments. Accordingly, loss to historic environments is not necessarily seen as a loss of the value that people attach to them.

Letting-go can be framed as curated decay (DeSilvey, 2017) and in more actionable terms, adaptive release (DeSilvey et al., 2021; DeSilvey et al., 2022). The concept of curated decay is coined based on strategic relinquishment of historic environments in a number of sites. One example is of a deteriorating Cold War era military testing facility in the UK (DeSilvey, 2017). This facility is being managed through the takeover by nature. The result is a variety of fresh foliage growing out of the rubble of the former facility. In DeSilvey's (2017: 86) reading, this reflects stories of the site's former military function. Here the result of change is the new value, i.e., age value, to use Alois Riegl's classification (DeSilvey, 2017: 81). The emergent value is in the "aesthetics of decay" (DeSilvey, 2017: 81). Further, artworks complement and draw from the change underway and are themselves temporary (DeSilvey, 2017: 90). This site is an example of a historic environment in transition. The new values that are created are directly connected to the takeover of nature and a result of the change process itself.

Taken further as an exploration in policy, letting-go can take the form of adaptive release (DeSilvey et al., 2021; DeSilvey et al., 2022). In this case it becomes an alternative to managed decline, which is currently the most change-oriented conservation response in UK policy (DeSilvey et al., 2021: 3). Managed decline involves the documentation of the ebbing historic environment through preservation-by-record, followed by attempts to slow the damage to the extent possible (DeSilvey et al., 2021: 3). Adaptive release takes managed decline further. It attempts to change the language and perceptions around loss, from negative (decline) to positive (release) (DeSilvey et al., 2021: 3). Accordingly, it embodies a proactive rather than reactive approach to loss (DeSilvey et al., 2022: 5). Adaptive release as a response in policy and its intersections with compensation are discussed later in this chapter.

Letting-go as loss itself

Letting-go can embody the loss of historic environments itself, rather than being a *response* to loss of environments from other factors. In this reading, as in the previous discussion, the physical material of the historic environment or objects is subordinate to its values.

Letting-go as loss itself is seen in building practices across the world. In precolonial India and other parts of South Asia, building practices re-create historic environments, which means material is lost and regenerated. These practices are an intuitive act. They are a pre-colonial vestige from before the institutionalisation of conservation and heritage by the colonial government.

Building practices are characterised as conservation in both the Indian and Nordic contexts (Menon, 2003; Menon, 2008; Poulios, 2010; Jain, 2010: 53; Almevik et al., 2022: 3). In the Indian context, this characterisation sees historic environments in constant evolution. Here, authenticity lies in the practices and the sites of building, not in the static objects that the practices generate (Menon, 2003). In this approach, the loss of material may be replaced by a new object, constructed through an old practice. This is a "living heritage approach" – continuity and impermanence in non-western contexts are viewed through the lens of conservation (Poulios, 2010). Poulios (2010) champions a move from preservation of material to the renewal of community associations to the site. Loss of historic environments and objects across Africa and Asia are met with regeneration (Poulios, 2010: 176-7; Larsen, 1994: 13-14). Letting-go through practices is seen in the example of the immersion of clay idols of the Hindu God Ganesha (Poulios,

2010: 177). The immersion of the idols at the end of the festivities highlights the inherent temporality of material, absence of attachment to it, and "heritage" as "living" (Poulios, 2010: 177). The immersion practice continues every year, with new idols being created and subsequently released into the water.

There are calls for these practices to be institutionalised in policy. According to Menon (2003), traditional building practices need to be included in conservation policy alongside colonially inherited ones, since both are part of India's cultural legacy. The Charter for Conservation of Unprotected Architectural Heritage and Sites in India (Intach, 2004) formalises traditional building practices as a valid part of official conservation. It was co-authored by AGK Menon, on behalf of the influential heritage NGO, the Indian National Trust for Art and Cultural Heritage (Intach).

In the Nordic context, building practices are theorised as "craft sciences" (Almevik, et al., 2022: 3). Here too, conservation can take the form of change, repair, and traditional knowledge (Almevik et al., 2022: 11). Accordingly, loss of physical historic environments or objects can be wired into the conservation practice. Whether historical gardening practices (Seiler, 2022) or traditional boat-building ones (Leijonhufvud, 2022), the product is often less important than the process of its creation, by way of knowledge and skills. Larsen and Marstein (2020: III) refer to craft practices in the context of timber structure conservation. They advocate duplicating the material because authenticity is embedded in the "insight, wisdom and knowledge" that previous generations deployed in their making (Larsen and Marstein, 2020: III). In the implicit call to let go of material, they focus on the practice over the product.

Letting go of material through building and craft practices focuses on the value of the practice and the process of creation. Though these are linked to the environment or object they create, the value is not dependent on the physical outcome. This is regardless of whether letting go of material is an intentional pushback to material preservation or a by-product of the regeneration of building practices.

Overall, both letting-go as a response to loss and letting-go as loss itself, see authenticity in the values or practices associated with historic environments, rather than the physical material of historic environments themselves. Accordingly, letting-go can be characterised as compensation by way of its quality of being creative and generative, either by way of creating new values, or by way of re-creating them through building practices.

Letting-go as a response to loss is, however, more pertinent to the exploration of compensation than letting-go as loss itself. This is because compensation is also a response to loss. For DeSilvey (2017: 187), letting-go is an active and conscious engagement with the historic environment, through "creation, cultivation, improvisation, renewal". These are some of the core qualities of compensation.

Letting-go as a response to loss inhabits the creative aspects of compensation, but there is a need to further interrogate its premises, in order to fully explore it as a response to urban planning projects. This is because letting-go is not only about relinquishing material but also about relinquishing control. The process of change creates new values – this is rooted in unpredictability. Further, the driver of change is climatic processes rather than urban planning projects (DeSilvey et al., 2022: 8). Given these factors, the next section deepens the analysis of letting-go, in order to understand how it holds up as a response in planning.

Letting-go as a response to loss in planning

Before exploring letting-go as a form of compensation, it is essential to analyse it against compensation as found in planning practice and theory. This is because compensation is a response to urban planning, and as previous discussions in the thesis show, it firmly draws on institutional frameworks, regulations, and policy.

This section analyses letting-go within planning in three sub-sections. The first analyses adaptive release in relation to compensation based on the analytical tool previously developed in the thesis. The second sub-section analyses the domains of application of letting-go as a response to urban planning projects. The third sub-section borrows from the first two, to offer a potential way forward for further developing compensation as a response to loss due to urban planning projects.

Adaptive release and the analytical tool

Both adaptive release and compensation are part of a range of actionable responses to the loss of historic environments. Adaptive release is an expression of letting-go. As explored in policy, it is part of a spectrum of "low-to-high-impact management options" (DeSilvey et al., 2022: 5). This is seen in Figure 35. Low impact options are the least radical and strive to maintain the status quo, while high impact options give way to adaptive release (DeSilvey et al., 2022: 5-6). Maintenance is the proposed approach for when the impact is considered small, while adaptive release, for when it is high. It is an option for sites protected by legislation when other strategies "may no longer be feasible" (DeSilvey et al., 2022:

5). Accordingly, it not the foremost choice but rather an option for when change is inevitable and must therefore be worked with.

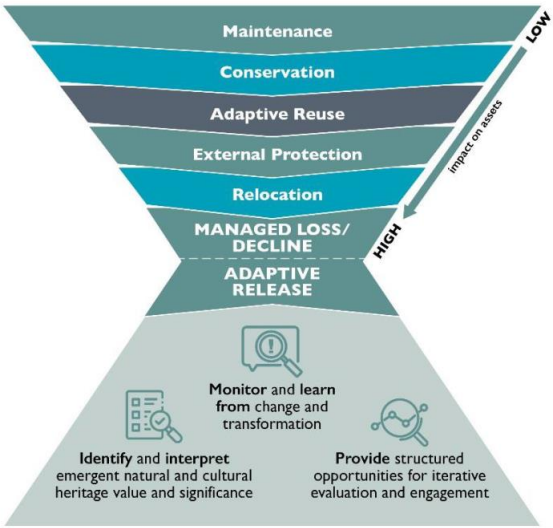

Figure 35: "Low impact" to "high impact" management options, leading to adaptive release

Source: DeSilvey et al. (2022: 5)

The response is reliant on the change process itself. During the process of letting go of material, adaptive release actions could include virtual storytelling and other tools that present narratives of the change underway (DeSilvey et al., 2021: 7). In this case, storytelling is not a tool to preserve a memory but almost therapeutic in its assistance with coming to terms with eventual, inevitable, irrevocable loss. Adaptive release is a response without a predefined ending. As values of the historic environment change as a result of adaptive release, the response could also be temporary, and end up in adaptive reuse instead (DeSilvey et al., 2022: 7). So adaptive release can be a step on the way to complete loss, or enable a preceding response on the spectrum of management options, such as adaptive reuse.

Compensation, as found in this thesis, is part of the analytical tool developed based on the findings from urban planning practice. The analytical tool has overlaps and intersections with DeSilvey et al.'s (2022) spectrum. Neither prescribes a hierarchy of responses. This makes the responses context-specific and deployed based on situational need. This is unlike the damage mitigation hierarchy in Swedish policy which follows the priority order of avoid, minimise, remedy, and compensate (NBHBP, 2018: Gothenburg City, 2008). Further, DeSilvey et al's

(2022: 5) spectrum does not include avoiding damage, presumably because the authors are dealing with change from natural drivers, such as climate change. This is not engineered and therefore unavoidable. The maintenance option is closest to the minimise-damage response of both the damage mitigation hierarchy as well as the analytical tool.

Adaptive release has overlaps and deviations with compensation on the analytical tool. Both are change-oriented responses. They seek to work with change to the historic environment, rather than resist it, and creation is an outcome. Adaptive release however, is premised on unpredictability. There is the unintentional creation of new values that are forged in the process of letting go of the material. These values are not priorly defined, and even the response can take a U-turn by becoming adaptive re-use along the way. Compensation, on the other hand, is a strategic creative response. The creation of values comes from the intentional addition of programmes, functions, and physical objects in the face of change to the historic environment.

Further, adaptive release and compensation both comprise storytelling. However, they convey stories differently. Storytelling in adaptive release is about generating a new value altogether, one that is created in consonance with the change process. The story is about forgetting or about change (DeSilvey et al., 2021: 7). This is in keeping with storytelling related to letting-go in general, where the story is one that seeks to "open up rather than close down" (DeSilvey, 2017: 71). Accordingly, the story is a consciously constructed narrative rather than a selection of supposedly accurate historical events. In compensation, the story is rooted in the lost historic environment and aimed at conserving its research value. There is limited creation when it comes to new values. The focus of adaptive release is less on the physical historic environment as compared to compensation. This makes it the most change-oriented option from those on the analytical tool. Accordingly, it can be placed after compensation-by creation.

Domains of application of letting-go

Both adaptive release and compensation are creative, change-oriented responses. However, letting-go as previously discussed is unpredictable and a response to natural processes. Compensation is a response in planning, and to urban planning projects. It is therefore important to scrutinise the application of letting-go as a response to historic environment loss from urban planning.

In challenging material preservation, letting go of historic environments is often premised on the separability of values from physical environments. This requires careful consideration because it runs the risk of reducing all heritage to the purely intangible (Skrede and Hølleland, 2018: 83) and disregarding the "corporeal influences" of material things on humans and non-humans (Harrison, 2013: 112-113). As Skrede and Hølleland (2018: 89) write, material can have a powerful hold on people. They suggest that the tangible and intangible are complementary rather than antagonistic (Skrede and Hølleland, 2018: 89). Olsen (2010) too writes against the "antimaterial" turn in social sciences. Overall, rejecting the affective power of material objects and environments risks throwing the baby out with the bathwater.

Letting-go in response to climatic drivers does not sit snugly with letting-go in response to intentional urban planning projects. This is acknowledged by DeSilvey et al. (2022: 8) who conceptualise letting-go as a response to natural processes, as opposed to "unsympathetic development and neglect". The mindset towards change from non-engineered and ongoing processes is one of having to accept and embrace inevitability. The driver of change is important because letting go of historic environments outside the realm of certain drivers can be damaging. It risks disinheriting people who value those lost environments, physical qualities and all. In the example of the Twin Towers in New York, Holtorf (2015: 406) suggests that loss of historic environments can actually exacerbate memories. Similarly, he notes of the political clashes resulting in destruction in the ancient city of Palmyra in Syria:

> "Indeed, it may have grown rather than been diminished through the recent events." (Holtorf, 2015: 417)

These examples disregard the circumstances of the change, and consequently, the basis for the new value or memory created. While new values may be created, their desirability is questionable, because their creation comes from a context of violence.

Letting-go requires careful consideration in the planning context. Urban planning driven change is human engineered and offers the opportunity to make choices on its direction and impact. The actors behind the change have agency and a role in determining its direction, even as change is inevitable (Seppänen, 2020: 253). Actors can consider historic environments facing loss in various ways, such as, "as a problem, potential, burden or resource in city planning" (Seppännen, 2020: 253). Where historic environments are considered burdensome, letting-go

can veer closer to ill-conceived demolition rather than well-considered release. Demolition, though a change-embracing response, does not necessarily come from intentions to conserve or manage change to the historic environment. In the absence of intentions to manage change, demolition has no place on the analytical tool.

Further, the social, political, and economic contexts of deploying the letting-go response is crucial. Letting-go in theory is framed as a pushback to policy and practice that favour dogmatic physical preservation of historic sites. However, it can also be misused by economically or politically motivated actors. Change, in the form of urban development projects, as Short (2020) points out, can have damning consequences for the existing historic environment, in terms of physical, aesthetic, cultural, and social fallouts. Short's (2020: 235) example indicates that conservation challenges are very much linked to political and economic factors that drive change. It is a reminder to scrutinise the nature of change.

Letting-go, in a context like India, where conservation policy is still not fully developed, can further result in misuse. Demolition, for example, is already permissible in the diluted Development Control and Promotion Regulations (2018). Institutionalised letting-go could also inadvertently sanction demolition in the context of majoritarian politics. In a climate of right-wing nationalism, there are frequent media reports of demands for demolition of mosques with subsequent replacement by Hindu temples (Pandey, 2022; Ather, 2023). Even the Taj Mahal is embroiled in such calls for demolition (Johny, 2023). Letting-go in this context is simply selection by another name. In selecting what to let go of it, the response enables selecting what to keep. It thus mirrors authorised views that form the critique of compensation through storytelling in West Link case, and can result in dissonance and disinheritance (Tunbridge and Ashworth, 1996).

A way forward: the "deep cities" approach

Letting-go as a form of compensation has limited application as a response to historic environment loss from urban planning projects. The discussion nevertheless contributes to potential further explorations of compensation that consider both values and the physical material of historic environments in the face of urban transformation. One such avenue for exploring compensation is the "deep cities" approach (Fouseki et al., 2020). This approach is aimed at sustainable transformations, where "deep" involves dealing with multiple temporal layers of a city, as well as long-term sustainability.

The deep cities approach shares many of the premises of letting-go, however, situates them within a planning context. This approach considers not only values of historic environments but also the environments themselves. As Fouseki et al (2020: 261) write, "deep cities are about the continuous integration of natural, cultural, smart, old, contemporary tangible or intangible layers of the life of a place". As with letting-go, the deep cities approach, privileges transformation as a value for historic environments (Fouseki et al, 2020: 6). Invoking DeSilvey (2017: 20), the authors aim to incorporate the changing nature of historic environments in urban planning (Fouseki et al., 2020: 8). In this view, historic environments are not passive recipients of change, but active drivers of positive transformations (Fouseki et al., 2020: 8).

The deep cities approach is relevant for compensation as it is geared towards policy and practice. As Fouseki et al. (2020: 1-2) see it, the incorporation of the temporal depth of historic environments into urban planning is a policy imperative. Crucially, they also acknowledge the specific nature of urban transformation and the challenge it poses to embracing change:

> "If we accept that 'deep cities' are about the continuous, changing and constantly evolving temporal layers shaped by the connections between the built fabric and the human experiences, where do the changes of the present (such as the construction of high-rise buildings) (see Short [2020]), fit in that trajectory? Are the high- rise buildings an added layer of value to the palimpsest of the city or a threat to the continuity of a 'deep city'? In other words, at what point do urban change and temporality become a cultural value and at what point do they become a threat?" (Fouseki et al., 2020: 261)

So, the "deep cities" approach encourages scrutinising not only the values of the affected historic environments but the values of the driver of change itself. This means evaluating its nature, as well as who stands to benefit (Short, 2020; Alverti and Fouseki, 2020). Borrowing from Short (2020), Fouseki et al (2020: 263) encourage thinking of change as a value, while also arguing for adaptation to change that is organic and at a steady pace rather than haphazard. Overall, the deep cities approach embodies several of the premises of compensation. It advocates for urban transformations that consider the historic environment in productive and dynamic ways.

Compensation, in the context of "deep cities", can help in furthering its application in urban planning practice. This call for further research aligns with the gaps in scholarship recognised by Fouseki et al. (2020: 267) as well. They argue that the "deep cities" approach could benefit from research in countries

undergoing rapid urban development, such as those in Asia and Eastern Europe, where the historic environment could provide a valuable element in planning (Fouseki et al., 2020: 267). They also point to the need for research in the area of negotiation between actors over the historic environment (Fouseki et al., 2020: 267), pointing to the environment of contestation in which decisions over the historic environment are made. The research in this thesis is particularly germane to these themes. Compensation through the deep cities approach would help stretch the possibilities of change-oriented conservation even further, potentially rendering dogmatic preservation a matter of the distant past.

Concluding remarks

This thesis sought to explore the scope of historic environment compensation in planning. Compensation is ill-defined, often contested, and overall lacks consistent interpretation. Depending on their perspective, some decry it as not adequately appreciating the qualitative aspects of historic environments. Others consider it through the lens of an unwillingness to accept change. However, if conservation is framed as the management of change rather than resistance to it, compensation opens up possibilities to deal with loss productively.

A central theme of the thesis is that conservation is dependent on the values of the historic environment and the way they are negotiated in the planning process. In planning, these values are constantly negotiated by those in charge. Historic environment compensation is one such form of negotiation. Accordingly, the thesis explores compensation in law and policy, theory, and practice.

Compensation in law and policy is disproportionately skewed in favour of environments considered from a natural sciences perspective. Understood from this perspective, compensation often connotes to the re-creation and/or relocation of the affected environments. It is the least preferred option in the face of loss. Further, re-creation/relocation are considered anathema for historic environments, which are largely dealt with through damage mitigation. Accordingly, provision for historic environment compensation is limited and historic environment values largely marginalised. There are, however, attempts by authorities to conceptualise new ways of working with historic environments, such as through "strengthening", that go beyond material preservation or minimising damage.

Compensation in theory in relation to planning is at a fledgling stage. Its explorations largely depend on the same methodological toolbox as in

compensation in law and policy, and are still exploratory. Compensation can take the form of creation of new objects or environments, as well as in their relocation. The value of the lost or affected environment is considered paramount though the connection between its lost value and the new creation is not always self-evident. Some of the explorations focus more on rendering smoother implementation of the new urban plan, than enriching the historic environment.

Compensation in practice is part of a spectrum of possible responses to urban planning projects. The thesis develops an analytical tool to map this spectrum, from least to most change-oriented, based on two cases, the West Link train tunnel in Gothenburg, and the Mumbai Metro, in Mumbai. Compensation, as found in the West Link, lies at the most change-oriented end of the spectrum. The response found in the Mumbai Metro is in the realm of material preservation. Compensation takes the form of interpretation of the affected historic environment through the two responses of compensate-by-strengthening and compensate-by-creating, which different in scale and scope. Further, compensation is aimed at storytelling. Storytelling is expressed through additive ways of working with the historic environment's capacity to convey knowledge about its lost physical elements. Compensation is also, to a limited extent, aimed at "storyreading". Storyreading is a concept developed in this thesis and understood as an approach to urban planning that seeks to conserve spatial comprehension through the re-creation of an environment's historical layout. Overall, the compensation response emerges in sharp relief to preservation, which aims for preservation of physical and visual integrity.

Both compensation and preservation however involve a selection of values by experts and an exclusion of certain values that do not fit within formal planning. The responses also reflect that conservation is deeply entangled with other planning processes. Negotiation of values happens to varying degrees and a number of heritage-related discourses is mobilised in the process. Conservation, whether through compensation or preservation, is embedded in planning and its outcomes are deeply dependent on multiple actors and their approaches, various institutional and policy frameworks, regulations, and a plethora of associated constraints.

The final exploration of compensation is purely theoretical, and attempts to push the bounds of the concept even further. The thesis toys with the idea of compensation including the letting go of historic environments altogether, in moments of change. In this theoretical excursion, compensation is about the unpredictable potential generation of new values from the relinquishment of

historic material. This thinking has limited direct application as a response to urban planning projects. This is because it is conceptualised for change that is inevitable and ongoing rather than intentional. It does not fully consider its social and political intentions and implications when deployed in planning. The theoretical consideration of letting-go as a form of compensation encourages thinking of other change-oriented approaches to compensation that are particularly suited to planning. Accordingly, the thesis lands on the deep cities approach as an avenue of further enquiry. Future research on compensation in planning can benefit from exploring its relationality with the deep cities approach, wherein historic environments are placed in the broader context of sustainability of all kinds.

Sammanfattning på svenska

Denna avhandling syftar till att utforska begreppet kompensation och dess hantering inom stadsplaneringsprocesser som involverar värdefulla kulturmiljöer. Begreppet kompensation i förhållande till kulturmiljö är oftast bristfälligt definierat, och det råder ofta oenighet om tolkningen av dess rumsliga påverkan. Å ena sidan kan kompensation uppfattas som en åtgärd som inte fullt ut tar hänsyn till kulturmiljöernas kvaliteter, medan det å andra sidan kan ses som ett hinder för förändring och utveckling.

Den här avhandlingen tar sin utgångspunkt i en förståelse av bevarandepraktik som en ändamålsenlig hantering av förändring snarare än ett motstånd mot förändring. Avhandlingen ämnar därför utforska de möjligheter som kompensation kan erbjuda som ett tillvägagångssätt för att konstruktivt hantera förlusten av kulturvärden i urbana stadsomvandlingsprocesser. Bevarandepraktiken förstås här som beroende av de specifika kulturmiljövärden som är definierade för en plats och hur olika aktörer förhandlar om dessa värden i planeringsprocessen. Kompensation ses som en form av sådan förhandling, och undersökningen sträcker sig över juridiska och politiska aspekter, såväl som teori och praktik, med särskild inriktning på den svenska kontexten.

Inom juridik och policy hanteras kompensation främför allt i relation till naturmiljöer, där åtgärder syftar till att mildra de negativa påverkningar som ett utvecklings- eller byggprojekt kan ha på biologisk mångfald. Att återskapa våtmarker, skogsområden eller vattendrag alternativt flytta djur eller växter är kompensationsåtgärder som betraktas som en sista utväg inom miljöskydd och naturvård. Generellt anses återskapande eller flytt av kulturmiljöer vara om möjligt än mer olämpligt, och i stället förespråkas undvikande av skada eller skademinimering i samband med planering och byggande. Det är sällsynt att kompensation för potentiell negativ påverkan på historiska eller kulturella värden uttryckligen hanteras. Det finns dock försök från myndigheter att definiera nya metoder inom kulturmiljöplanering, såsom ”stärkande åtgärder”, vars innebörd sträcker sig bortom strikt materiell bevarande eller skademinimering.

Teoretiskt sett är begreppet och tillämpningen av kompensation inom kulturmiljöplanering relativt nytt. Samtidigt som ett utforskande pågår, är förståelseramen till stor del beroende av de metodologiska angreppssätt som gäller för kompensation av naturmiljöer. Enligt ett synsätt innebär kompensation ett skapande av nya objekt eller miljöer, enligt ett annat tolkas det som förflyttning av värden. Kulturvärden har en central roll i den teoretiska förståelsen av kompensation som fenomen, även om sambanden mellan påverkade eller förlorade kulturvärden och skapandet av nya värden inte alltid är självklara. Vissa teoretiska diskussioner om kompensation fokuserar mer på att underlätta planeringsprocesser än på att berika kulturmiljöer.

I praktiken är kompensation en del av det spektra av möjliga handlingsalternativ som kan implementeras inom omfattande stadsplaneringsprocesser. Avhandlingen utvecklar ett analytiskt verktyg för att kartlägga detta spektrum, som sträcker sig från de minst förändringsinriktade till de mest förändringsinriktade angreppssätten. Detta görs baserat på två fallstudier, med fokus på hanteringen av kulturmiljön i planeringen och byggandet av Västlänken i Göteborg respektive Mumbai Metro, i Mumbai. De åtgärder för kulturmiljön som åberopas i planeringen av Mumbai Metro handlar om ett traditionellt materiellt bevarande, medan den typ av åtgärd som åberopas i Västlänken ligger i den mest förändringsorienterade delen av spektrumet. Här syns kompensation av kulturmiljövärden handla om stärkande och skapade åtgärder, som varierar i skala och innehåll. Dessutom kommer kompensation ibland till uttryck i form av ”storytelling”, den process som handlar om att berätta en historia eller skapa en narrativ upplevelse för att kommunicera stadens historia på ett engagerande sätt. Därtill kommer kompensation till uttryck, även om det är något begränsat, som ”storyreading”, det vill säga som en strategi för att bevara den historiska rumsliga förståelsen genom att bibehålla kulturmiljöns visuella sammanhang. Sammantaget framträder kompensation som ett antal handlingsalternativ som kontrasterar mot ett strikt bevarande av fysisk och estetisk integritet.

Spektrumet av handlingsmöjligheter, och de val som aktörer gör mellan kompensation och strikt materiellt bevarande av kulturmiljövärden, reflekterar de värderingar som experter har och som har en dominerande inverkan på andra värderingar inom ramen för formell planering. Dessa handlingsalternativ avspeglar också hur kulturmiljöfrågan är djupt integrerat med andra planeringsfrågor och processer, som överlappar i tid och rum. Värdeförhandling sker kontinuerligt och ett antal kulturarvsrelaterade diskurser mobiliseras i processen. Hanteringen av

kulturmiljön, oavsett om det sker genom kompensation eller strikt materiell bevarande, utgör endast en del av planeringsfrågorna. Dess utfall är beroende av en mångfald aktörer med olika tillvägagångssätt, varierande institutionella och politiska ramar, olika juridiska ramverk och en mängd olika medföljande utmaningar.

Avhandlingens avslutande diskussion om kompensation är teoretiskt driven och syftar till att utforska gränserna för begreppets betydelse. Här utforskas idén om vad det innebär att förlora kulturmiljöer helt och hållet, i förändringsprocesser. Kompensation betraktas här som ett tillvägagångssätt som försöker navigera det oförutsägbara och det potentiella skapandet av nya värden, särskilt i situationer där kulturmiljövärden obönhörligt går förlorade, som i klimatkrisens påverkan eller i övergivna landskap. Detta tillvägagångssätt har dock begränsad tillämpbarhet inom stadsplaneringsprocesser, särskilt eftersom dessa processer är avsiktliga och innebär att inblandade aktörer måste ta hänsyn till de sociala och politiska konsekvenser av de beslut som fattas.

Det teoretiska perspektivet på kompensation som ett sätt att ”släppa taget” om kulturmiljöer och deras värden uppmuntrar dock att överväga andra förändringsinriktade synsätt på kompensation som kan vara särskilt lämpade för planeringsprocesser. Som ett resultat av detta landar avhandlingen i det som kallas ”the deep cities approach” och uppmanar till framtida forskning inom området kompensation av kulturvärden att beakta förhandlingsstrategier som hanterar de djupgående och komplexa aspekter som påverkar stadsmiljön, inklusive socioekonomiska strukturer, historia och kulturarv.

Nyckelord: kompensation, planering, bevarande, kulturmiljö, förlust av kulturvärden, infrastruktur, Västlänken, Göteborg, Mumbai, Indien

Bibliography

Academic sources

Almevik, G., Groth, C. and Westerlund, T. (2022) 'Explorations in Craft Sciences'. In: Westerlund, T., Groth, C. and Almevik, G. eds. *Craft Sciences*. Sweden: Kriterium.

Alverti, E. and Fouseki, K. (2020) 'Urban 'regeneration' in historic places: the case of king's cross central, London'. In: Fouseki, K., Guttormsen, T.S. and Swensen, G. eds. *Heritage and Sustainable Urban Transformations. Deep Cities*. London and New York: Routledge.

Ashworth, G.J. (1991) *Heritage Planning: Conservation as the management of urban change*. Groningen: GeoPers.

Ashworth, G.J. (1997) 'Conservation as Preservation or as Heritage: Two Paradigms and Two Answers'. *Built Environment*, 23 (2): 92-102

Ashworth, G. (2011) 'Preservation, Conservation and Heritage: Approaches to the Past in the Present through the Built Environment'. *Asian Anthropology,* 10 (1) 1-18.

Axelsson, T. (2015) Systematisk destruktion – värde, förlust och kompensation (Systematic destruction – value, loss and compensation). In: B. Grahn Danielson, M. Rönn & S. Swedberg eds. *Kompensationsåtgärder vid exploatering i kultur- och naturmiljöer (Compensation measures in Exploitation Cultural and Natural Environments)*. Kulturlandskapet and KTH/Arkitektur.

Avrami, E., Mason, R. and de la Torre, M. (Ed.) (2000) *Values and Heritage Conservation*. Los Angeles: The Getty Conservation Institute.

Baig, A. and Mehrotra, R. (2012) 'The Initiative'. In: Baig, A. and Mehrotra, R. eds. *Thinking Conservation: Contemporary Perspectives for India*. Jasubhai Media.

Ballinger, C. (2008) 'Content analysis'. In: Given, L. M. ed. *The SAGE Handbook of Qualitative Data Analysis*. London, Thousand Oaks and New Delhi: Sage.

Ben-Malka, R., and Poria, Y. (2019) 'Compensation for elimination: an innovative technique for evaluating the monetary value of cultural heritage sites'. *Journal of Heritage Tourism*, 15 (2), 228-231.

Bortolotto, S., Cattaneo, N., and Massa, S. (2022) 'Heritage values and contemporary cultural landscapes in Adulis'. In: Kouzelis, A., Rönn, M. and Teraväinen, H. eds. *Compensation in Architecture and Archaeology*. Gothenburg: Kulturlandskapet and Chalmers University of Technology.

Cleere, H. (1984) 'World cultural resource management: problems and perspectives'. In: Clere, H. ed. *Approaches to the Archaeological Heritage*. Cambridge: Cambridge University Press.

Cochrane, A. (2014) 'Interviews'. In: Ward, K. ed. *Researching the city*. London: Sage.

Cowell, R. (2000). 'Environmental compensation and the mediation of environmental change: Making capital out of Cardiff Bay'. *Journal of Environmental Planning and Management*, 43 (5): 689-710.

Davies, T. (2020) 'Defining new values for cavemen and finding the human in heritage'. In Rönn, M and Grahn Danielson, B. eds. *Cultural heritage compensation: Approaches to*

transformation of sites with cultural values and architectural qualities. Gothenburg: Kulturlandskapet & Architecture and Civil Engineering, Chalmers University of Technology.

Davies, T. and Standal, A. (2022) 'Narratives of fish, trade and coastal communities: Use and resource management as a tool for heritage and environment compensation'. In: Kouzelis, A., Rönn, M. and Teraväinen, H. eds. *Compensation in Architecture and Archaeology*. Gothenburg: Kulturlandskapet and Chalmers University of Technology.

de la Torre, M. (Ed.) (2002) *Assessing the Values of Cultural Heritage*. Los Angeles: The Getty Conservation Institute.

Denzin, K.N. and Lincoln, Y.S. (2018) 'Introduction: The Discipline and Practice of Qualitative Research'. In: Denzin, K.N. and Lincoln, Y.S. eds. *The SAGE Handbook of Qualitative Research*. London: Sage.

DeSilvey, C. (2006) 'Observed Decay: Telling Stories with Mutable Things'. *Journal of Material Culture*, 11: 3.

DeSilvey, C. (2012) 'Making sense of transience: an anticipatory history'. *Cultural Geographies*, 19 (1): 31-54.

DeSilvey, C. (2017) *Curated Decay*. Minneapolis and London: University of Minnesota Press.

DeSilvey, C. and Harrison, R. (2019). 'Anticipating loss: rethinking endangerment in heritage futures'. *International Journal of Heritage Studies*, 2 (1): 1-7.

DeSilvey, C., Fredheim, H., Fluck, H., Hails, R., Harrison, R., Samuel, I. and Blundell, A. (2021) 'When Loss is More: From Managed Decline to Adaptive Release'. *The Historic Environment: Policy & Practice*, 12: 3-4.

Djabarouti, J. (2021) 'Stories of feelings and things: intangible heritage from within the built heritage paradigm in the UK'. *International Journal of Heritage Studies*, 27 (4): 391-406.

Dore, M. (2022) 'Heritage compensation in changing environments: The case of the West Link infrastructure project, Gothenburg'. In: Kouzelis, A., Rönn, M. and Teraväinen, H. eds. *Compensation in Architecture and Archaeology*. Gothenburg: Kulturlandskapet and Chalmers University of Technology.

Ekberg, L. (2018) *Västlänken – Infrastruktursatsning I envägskommunikation eller dialog? (The West Link – Infrastructure investment in one-way communication or dialogue)*, Bachelor's thesis. University of Gothenburg.

Fairclough, G. (2008) 'A New Landscape for Cultural Heritage Management: Characterisation as a Management Tool'. In: Lozny, L.R. ed. *Landscapes Under Pressure*. Boston: Springer.

Feilden, B. (1982) *Conservation of Historic Buildings*. Burlington, MA: Architectural Press.

Flick, U. (2014) 'Mapping the Field'. In: Flick, U. ed. *The SAGE Handbook for Qualitative Data Analysis*. London: Sage.

Fredholm, S. (2017) *Making Sense of Heritage Planning in Theory and Practice. Experiences from Ghana and Sweden*. Published PhD thesis. University of Gothenburg.

Fredholm, S., Dore, M. and Brorström, S (2021) 'Strategic Responses to Wicked Problems of Heritage Management: Experiences from the West Link Infrastructure Project in Gothenburg, Sweden'. *Land*, 10 (10): 1032.

Flyvbjerg, B. (2006) 'Five Misunderstandings About Case-Study Research'. *Qualitative Inquiry*, 12 (2), 219-245.

Fouseki, K., Guttormsen, T.S. and Swensen, G. (2020) 'Heritage and sustainable urban transformations. A 'deep cities' approach'. In: Fouseki, K., Guttormsen, T.S. and Swensen, G. eds. *Heritage and Sustainable Urban Transformations. Deep Cities*. London and New York: Routledge.

Galbin, A. (2014). 'An Introduction to Social Constructionism'. *Social Research Reports* 26: 82-92.

Grahn Danielson, B., Rönn, M. and Swedberg, S. (2013) 'Policies and Compensation Measures: The Impact of Land Development on the Values of Cultural Heritage Sites in a Democratic Landscape'. *Meeting of the European Association of Archaeologists*. Pilsen, Czech Republic, 4-8 September.

Grahn Danielson, B., Rönn, M., and Swedberg, S. (2014). 'Sammanfattning. Kulturarv i samhällsplaneringen' ('Summary. Cultural heritage in planning'). In : Grahn Danielson, B, Rönn, M. and Swedberg, S. eds. *Kulturarv i samhällsplaneringen – Kompensation av kulturmiljövärden* (*Cultural heritage in planning - Compensation of cultural values)*. Kulturlandskapet and KTH/Arkitektur.

Guzmán, P.C., Pereira Roders, A.R., Colenbrander, B.J.F (2014) 'Bridging the gap between urban development and cultural heritage protection', *Impact Assessment for Social and Economic Development*. International Association for Impact Assessment, Viña del Mar, Chile, 8-11 April.

Harrison, R. (2013) *Heritage. Critical Approaches.* London and New York: Routledge.

Hobson, E. (2004) *Conservation and Planning*. London: Spon.

Holtorf, C. (2015) 'Averting loss aversion in cultural heritage'. *International Journal of Heritage Studies*, 21 *(*4), 405-421.

Jain, S. (2012) 'Values in Conservation'. In: Baig, A. and Mehrotra, R. eds. *Thinking Conservation: Contemporary Perspectives for India*. Jasubhai Media.

Janssen, J., Luiten, E., Renes, H. and Stegmeijer, E. (2017) 'Heritage as sector, factor and vector: conceptualizing the shifting relationship between heritage management and spatial planning'. *European Planning Studies*, 25 (9), 1654–1672.

Johansson, R. (2007) 'On case study methodology', *Open House International*, 32 (3), 48-54.

Jokilehto, J. (1999) *A History of Architectural Conservation*. London and New York: Routledge.

Joy, C. (2020). *Heritage Justice.* Cambridge: Cambridge University Press.

Kalman, H. (2014) *Heritage Planning: Principles and Process*. London and New York: Routledge.

Kelle, U. (2014) 'Theorization from Data'. In: Flick, U. ed. *The SAGE Handbook for Qualitative Data Analysis*. London: Sage.

Kirkegaard, M. (2020) 'Cultural environments – A Social matter'. In Rönn, M and Grahn Danielson, B. eds. *Cultural heritage compensation: Approaches to transformation of sites with cultural values and architectural qualities.* Gothenburg: Kulturlandskapet & Architecture and Civil Engineering, Chalmers University of Technology.

Kouzelis, A. (2020) 'Vernacular architecture design principles and resources of compensation in planning process'. In Rönn, M and Grahn Danielson, B. eds. *Cultural heritage compensation: Approaches to transformation of sites with cultural values and architectural qualities.* Gothenburg: Kulturlandskapet & Architecture and Civil Engineering, Chalmers University of Technology.

Kouzelis, A. (2022) 'The open-air archaeological museum as model of cultural compensation'. In: Kouzelis, A., Rönn, M. and Teraväinen, H. eds. *Compensation in Architecture and Archaeology*. Gothenburg: Kulturlandskapet and Chalmers University of Technology.

Larsen, K.E. (1994) *Architectural Preservation in Japan*. Trondheim: Tapir.

Larson, K.E. and Marstein, N. (2000) *Conservation of Historic Timber Structures, An ecological approach (Butterworth-Heinemann Series in Conservation and Museology).* Oxford: Butterworth-Heinemann.

Larsson, A. (2020). 'Place logic rather than project logic – Landscape observatories as regional coordinators of large scale projects and compensation measures'. In: Rönn, M and Grahn Danielson, B. eds. *Cultural heritage compensation: Approaches to transformation of sites with cultural values and architectural qualities.* Gothenburg: Kulturlandskapet & Architecture and Civil Engineering, Chalmers University of Technology.

Leijonhufvud, F. (2022). 'Interpretation of Boats in a Craft Tradition: How the Craftsperson's Perspective Can Improve the Interpretations of Artefacts in Research'. In: Westerlund, T., Groth, C. and Almevik, G. eds. *Craft Sciences*. Sweden: Kriterium.

Lerman, P. (2014) 'Kompensation för kulturmiljöintresse' ('Compensation for cultural environment interests'). *Kulturarv i samhällsplaneringen – Kompensation av kulturmiljövärden (Cultural heritage in community planning – Compensation of cultural environment values).* Kulturlandskapet and KTH/Arkitektur.

Lowenthal, D. (1998) 'Fabricating Heritage'. *History and Memory, 10* (1): 5-24.

Lowenthal, D. (2015) *The Past is a Foreign Country – Revisited*. Cambridge: Cambridge University Press.

Mason, R. (2008) 'Be Interested and Beware: Joining Economic Valuation and Heritage Conservation'. *International Journal of Heritage Studies*, 14 (4): 303-318.

Mason, R. and Avrami, E. (2002) 'Heritage Values and Challenges of Conservation Planning'. In: Teutonico, J.M. and Palumbo, G. eds. *Management Planning for Archaeological Sites*. Los Angeles: The Getty Conservation Institute.

McClelland, A.G. (2018) 'Heritage and Value-Based Approach'. In: López Varela, S.L. ed. *The Encyclopedia of Archaeological Sciences*. Hoboken: John Wiley & Sons, Inc.

Mehrotra, R. (1992) 'Bazaars in Victorian Arcades [Transformation and Conservation in Historic Environments]'. *Places*, 8 (1): 24-31

Mehrotra, R. (2004) 'Constructing Cultural Significance: Looking at Bombay's Historic Fort Area'. *Future Anterior: Journal of Historic Preservation, History, Theory, and Criticism*, 1 (2): 24-31.

Mehrotra, R. (2007) 'Conservation and Change: Questions for Conservation Education in Urban India'. *Built Environment* 33 (3): 342-356.

Mehrotra, R. and Filipe Vera, L. (2016) 'Urbanism of Detachment'. *IN_BO. Ricerche e progetti per il territorio, la città e l'architettura* (9): 18-33.

Mehrotra, R. and Nest, G. (1994) *The Fort precinct in Bombay: conserving an image centre*. Mumbai: Max Mueller Bhavan.

Menon, A.G.K. (1989) 'Conservation in India—A Search for Direction'. *Architecture and Design*, 6 (1), 22-27.

Menon, A.G.K. (1997) 'Imagining the Indian City'. *Economic and Political Weekly*, 32 (46): 2932-2936.

Menon, A.G.K. (2003) *The Case for an Indian Charter*. Restoration and Renewal - A symposium on preserving our cultural heritage, Seminar Web-edition #530, New Delhi, October.

Menon, A.G.K. (2008) 'The Idea of Place in the Practice of Restoration and Replication in India'. *Concepts of Authenticity in Architectural Heritage Preservation*, an International Workshop of the Cluster of Excellence, Heidelberg University.

Menon, A.G.K. (2017a) 'The Rationale for Reviewing Current Concepts of Urban Planning and Developing New Ones in India'. *Built Heritage*, 3: 34-43.

Menon, A.G.K. (2019). 'Overwriting Historic Space in Modern Cities'. *Marg*, September: 38-45.

Muñoz-Viñas, S. (2005). *Contemporary Theory of Conservation*. London: Routledge.

Nakamura, C. (2014). 'Mumbai's quiet histories: Critical intersections of the urban poor, historical struggles, and heritage spaces'. *Journal of Social Archaeology*, 0 (0): 1-25.

Nilsson, U. (2020) 'Considerate conversion – in order to take care of and reuse cultural heritage. A practical example'. In Rönn, M and Grahn Danielson, B. eds. *Cultural heritage compensation: Approaches to transformation of sites with cultural values and architectural qualities*. Gothenburg: Kulturlandskapet & Architecture and Civil Engineering, Chalmers University of Technology.

Nilsson, U. (2022) 'Save what can be saved and tell the story: Balancing damage of industrial heritage by architectural interpretation'. In: Kouzelis, A., Rönn, M. and Teraväinen, H. eds. *Compensation in Architecture and Archaeology*. Gothenburg: Kulturlandskapet and Chalmers University of Technology.

Nordblad, J. (2014) 'Bortom det kvantitativa? Historiska perspektiv på värderingen av natur och kultur' ('Beyond the quantitative? Historical perspectives on the valuation of nature and culture'). *Kulturarv i samhällsplaneringen – Kompensation av kulturmiljövärden (Cultural heritage in community planning – Compensation of cultural environment values)*. Kulturlandskapet and KTH/Arkitektur.

Nyström, M. (2021) *Managing ecclesiastical heritage. Transformation of discourses, roles and policy in Sweden*. Published PhD thesis. University of Gothenburg.

Oevermann, H. and Mieg, H.A. (2015). 'Transformations of Industrial Heritage Sites: Heritage and Planning'. In: Oevermann, H. and Mieg, H. A. eds. *Industrial Heritage Sites in Transformation. Clash of Discourses*. New York and Abingdon: Routledge.

Olsen B. (2010) *In Defense of Things. Archaeology and the Ontology of Objects*. Lanham: AltaMira Press.

Pendlebury, J. (2008) *Conservation in the Age of Consensus* (E-book). London and New York: Routledge.

Pendlebury, J. (2013) 'Conservation values, the authorised heritage discourse and the conservation-planning assemblage'. *International Journal of Heritage Studies*, 19 (7): 709-727.

Pendlebury, J., Hamza, N. and Sharr, A. (2014) 'Conservation values, conservation-planning and climate change'. *disP - The Planning Review*, 50 (3): 43-54

Persson, J. (2011) *Att förstå miljökompensation (Understanding environmental compensation)*. Gothenburg: Melica Media.

Persson, J., Larsson, A. and Villarroya, A. (2014) 'Compensation in Swedish infrastructure projects and suggestions on policy improvements'. *Nature Conservation*, 11: 113–127.

Pettersson, H. (2004) *Compensation within Environmental Impact Assessment in Sweden and the United Kingdom*. PhD thesis. Institute of Water and Environment, Cranfield University at Silsoe.

Piplani, N. (2012) 'Engaging with Conservation at York.ac.uk'. In: Baig, A. and Mehrotra, R. eds. *Thinking Conservation: Contemporary Perspectives for India*. Jasubhai Media.

Poulios, I. (2010) 'Moving Beyond a Values-Based Approach to Heritage Conservation'. *Conservation and Management of Archaeological Site*s, 12 (2): 170-185.

Reichertz, J. (2014) 'Induction, Deduction, Abduction'. In: Flick, U. ed. *The SAGE Handbook of Qualitative Data Analysis*. London, Thousand Oaks and New Delhi: Sage.

Ross, D. (2020) 'Creative tourism and digital reconstruction: Two approaches for heritage loss compensation'. In Rönn, M and Grahn Danielson, B. eds. *Cultural heritage compensation: Approaches to transformation of sites with cultural values and architectural qualities.* Gothenburg: Kulturlandskapet & Architecture and Civil Engineering, Chalmers University of Technology.

Rönn, M. (2014a) 'Fallstudie: Folkets park i Linköping' ('Case study: People's park in Linköping'). *Kulturarv i samhällsplaneringen – Kompensation av kulturmiljövärden (Cultural heritage in community planning – Compensation of cultural environment values)*. Kulturlandskapet and KTH/Arkitektur.

Rönn, M. (2014b) 'Fallstudie: Kulturmiljö som riksintresse i planprojekt' ('Case study: Cultural environment as a national interest in a planning project). *Kulturarv i samhällsplaneringen – Kompensation av kulturmiljövärden (Cultural heritage in community planning – Compensation of cultural environment values)*. Kulturlandskapet and KTH/Arkitektur.

Rönn, M. (2020) 'Design, values, heritage – Renewal in areas with cultural values and architectural qualities'. In Rönn, M and Grahn Danielson, B. eds. *Cultural heritage compensation: Approaches to transformation of sites with cultural values and architectural qualities.* Gothenburg: Kulturlandskapet & Architecture and Civil Engineering, Chalmers University of Technology.

Rönn, M. and Grahn Danielson, B. (2020) 'Introduction'. In Rönn, M and Grahn Danielson, B. eds. *Cultural heritage compensation: Approaches to transformation of sites with cultural values and architectural qualities.* Gothenburg: Kulturlandskapet & Architecture and Civil Engineering, Chalmers University of Technology.

Rönn, M., Grahn Danielson, B. and Swedberg, S. (2017) 'Cultural Heritage: Changing Ideas on Compensation in Planning'. *Architectural Research in Finland,* 1(1): 75-92.

Rundcrantz, K. and Persson, J. (2011) 'Balansering och balanseringsprincipen' ('Balancing and the balancing principle'). In: Persson, J. ed. *Att förstå miljökompensation (Understanding environmental compensation)*. Gothenburg: Melica Media.

Seiler, J. (2022). 'Gardening Craft Reconstruction'. In: Westerlund, T., Groth, C. and Almevik, G. eds. *Craft Sciences*. Sweden: Kriterium.

Sepännen, L. (2020) 'The role of archaeology and heritage in sustainable urban planning with reflections from Turku, Finland'. In: Fouseki, K., Guttormsen, T.S. and Swensen, G. eds. *Heritage and Sustainable Urban Transformations. Deep Cities*. London and New York: Routledge.

Sjöholm, J. (2016) *Heritagisation, Re-Heritagisation and De-Heritagisation of Built Environments. The Urban Transformation of Kiruna, Sweden*. Published PhD thesis. Luleå University of Technology.

Sharma, T. (2012) 'Within Temple Walls – Preserving the Spirit of a Place'. In: Baig, A. and Mehrotra, R. eds. *Thinking Conservation: Contemporary Perspectives for India*. Jasubhai Media.

Short, M. (2020) 'High- rise buildings and the threats to character of Malta'. In: Fouseki, K., Guttormsen, T.S. and Swensen, G. eds. *Heritage and Sustainable Urban Transformations. Deep Cities*. London and New York: Routledge.

Skärbäck, E. (1997a) *Balanserad samhällsbyggnad (Balanced community building)*. Alnarp: Movium

Skrede, J. and Hølleland, H. (2018) '*Uses of Heritage* and beyond: Heritage Studies viewed through the lens of Critical Discourse' *Journal of Social Archaeology* 18(1): 77-96.

Smith, L. (2006) *Uses of Heritage*. London and New York: Routledge.

Söderqvist, T., Cole, S., Franzén, F., Hasselström, L., Beery, T.H., Bengtsson, F., Björn, H., Kjeller, E., Lindblom, E., Mellin, A., Wiberg, J. and Jönsson, K.I. (2021) 'Metrics for environmental compensation: A comparative analysis of Swedish municipalities'. *Journal of Environmental Management*, 299: 1-11.

Stone, S. (2020) *Undoing Buildings. Adaptive Reuse and Cultural Memory*. New York: Routledge.

Teräväinen, H. (2020) 'Unspoken compensations on cultural heritage value? Three planning examples from Finland'. In Rönn, M and Grahn Danielson, B. eds. *Cultural heritage compensation: Approaches to transformation of sites with cultural values and architectural qualities.* Gothenburg: Kulturlandskapet & Architecture and Civil Engineering, Chalmers University of Technology.

Taylor, J. (2015) 'Embodiment unbound: Moving beyond divisions in the understanding and practice of heritage conservation'. *Studies in Conservation*, 60:1, 65-77.

Thakur, N. (2012) 'The Indian cultural landscape. Protecting and managing the physical to the metaphysical values'. In: Taylor, K. and Lennons, J. L. eds. *Managing Cultural Landscapes*. New York and Abingdon: Routledge.

Tunbridge, J. E. and Ashworth, G. J. (1996) *Dissonant Heritage: The Management of the Past as a Resource in Conflict*. Michigan: Wiley.

Veldpaus, L., Pereira Roders, A.R. and Colenbrander, B.J.F. (2013) 'Urban Heritage: Putting the Past into the Future'. *The Historic Environment: Policy & Practice* 4:1 (3-18).

Walter, N. (2014) 'From values to narrative: a new foundation for the conservation of historic buildings'. *International Journal of Heritage Studies*, 20 (6): 634-650.

Weijmer, M. (2019) *I sökandet efter delaktighet. Praktik, aktörer och kulturmiljöarbete (In search of participation. Practice, actors, and cultural environment work)*. Published PhD thesis. University of Gothenburg.

Yin, R. (2018) *Case Study Research and Applications: Design and Methods* (6th ed.). Los Angeles: Sage.

Legal material

Admissibility condition for the West Link by government decision 2014 (Stockholm)

Development Control and Promotion Regulations 2018 (Mumbai)

Development Control Regulations 2008 (Mumbai)

Environmental Code 1998 (Stockholm)

Historic Environment Act 1988 (Stockholm)

Implementation agreement for the West Link between STA and City of Gothenburg 2016 (Gothenburg)

Judgement of the Land and environment court 2018 (Vänersborg)

Maharashtra Regional and Town Planning Act 1966 (Mumbai)

National interests for cultural environment values in Västra Götaland County 2022 (Stockholm)

Planning and building act 2010 (Stockholm)

Writ Petition No. 2890 in Bombay High Court 2018 (Mumbai)

Policy documents, reports, and catalogues

Central Public Works Department (2013) *Conservation of Heritage Buildings - A Guide*. New Delhi: CPWD.

DeSilvey, C., Fredheim, H., Blundell, A. and Harrison, R. (2022) *Identifying opportunities for integrated adaptive management of heritage change and transformation in England: a review of relevant policy and current practice*. London: Historic England.

Fredholm, S., Olsson, K., Wetterberg, O., and Håkansson, M. (2019). *Professionella aktörer och gränsöverskridande kulturmiljöarbete. Fallstudie: Västlänken (Professional actors and cross-sectoral negotiations on built heritage. Case study: The West Link)*. Gothenburg: STA.

The Getty Conservation Institute (2010). *Historic Urban Environment Conservation Challenges and Priorities for Action*. Los Angeles: The Getty Conservation Institute.

Gothenburg City (2008). *Kompensationsåtgärder för natur och rekreation (Compensation measures for nature and recreation)*. Gothenburg: Gothenburg City.

Gothenburg City (2019). *Bedömning av behov av Kompensationsåtgärder. Ekosystemtjänster inkl rekreation och biologisk mångfald" (Assessment of the need for compensation measures. Ecosystem services including recreation and biological diversity)*. Gothenburg: Gothenburg City.

Gothenburg City (n.d.). *Kompensationsåtgärder i plan- och exploateringsprojekt i Göteborgs Stad – natur, rekreation och andra ekosystemtjänster (Compensation measures in planning and development projects in Gothenburg city – nature, recreation and other ecosystem services)*. Gothenburg: Gothenburg City.

Gothenburg City (n.d.2). *Utvärdering av behov av Kompensationsåtgärder för rekreativa och ekologiska funktioner (Evaluation of the need for compensation measures for recreational and ecological functions)*. Gothenburg: Gothenburg City.

Historic England (2008) *Conservation Principles, Policies and Guidance*. London: English Heritage.

Kathpalia and Narain Lambah (2002) *Heritage Buildings & Precincts Mumbai: A Conservation Manual For Owners & Occupiers*. Mumbai: Urban Design Research Institute.

Maple and Mumbai Metro Rail Corporation Limited (2020). *Part-I: Updated Environmental Impact Assessment*. Maple.

Marshall, J. (1922) *Conservation Manual*. Varanasi: Government of India, Indological Book House.

Ministry of Urban Development (2011) *Model Heritage Regulations*.

Narain Lambah, A. and Mumbai Metropolitan Region Heritage Conservation Society (2002) *Dr Dadabhai Naoroji Road, Mumbai: Design Handbook for a Heritage Streetscape Guidelines and Street Furniture and Signage*. Mumbai: MMR-HCS.

National Heritage Board (1999) *Kulturarvet och miljön (Cultural heritage and environment)*. Stockholm: National Heritage Board.

National Heritage Board (2015) *Plattform Kulturhistorisk värdering och urval (Platform for cultural history evaluation and selection)*. Stockholm: National Heritage Board.

Persson, J. (2014). 'Inledning' ('Introduction'). In: Persson, J. ed. *Miljökompensation vid väg- och järnvägsprojekt – identifiering av status, problem och möjligheter (Environmental compensation for road and rail projects – identification of status, problems and opportunities).* Alnarp: SLU.

Persson, J. (2014). 'Att arbeta med miljökompensation – termer, metodologi och principer' ('Working with environmental compensation – terms, methodology and principles'). In: Persson, J. ed. *Miljökompensation vid väg- och järnvägsprojekt – identifiering av status, problem och möjligheter (Environmental compensation for road and rail projects – identification of status, problems and opportunities).* Alnarp: SLU.

Persson, J. and Hedlund, A. (2014). 'Reflektioner över miljökompensation kopplat till infrastruktur' ('Reflections on environmental compensation linked to infrastructure'). In: Persson, J. ed. *Miljökompensation vid väg- och järnvägsprojekt – identifiering av status, problem och möjligheter (Environmental compensation for road and rail projects – identification of status, problems and opportunities).* Alnarp: SLU.

Persson, J. and Larsson, A. (2014). 'En nationell kartläggning över miljökompensationsåtgärder i väg- och järnvägsprojekt' ('A national survey of environmental compensation measures in road and rail projects). In: Persson, J. ed. *Miljökompensation vid väg- och järnvägsprojekt – identifiering av status, problem och möjligheter (Environmental compensation for road and rail projects – identification of status, problems and opportunities).* Alnarp: SLU.

Rachana Sansad Academy of Architecture and Mumbai Metropolitan Region Heritage Conservation Society (2002) *Study of Ballard Pier Precinct*. Mumbai: MMR-HCS.

Rites and Mumbai Metro Rail Corporation Limited (2011). *Detailed Project Report*. Rites.

Swedish Government (1997) *Departementsserien: Kompensation för förlust av miljövärden (Ministry Publications Series: Compensation for loss of environmental values)*. Stockholm: Ministry of Environment.

Swedish Government (2013) *Swedish government inquiries: Making the value of ecosystem services visible*. Stockholm: Government of Sweden.

Swedish Government (2017) *Statens Offentliga Utredningar: Ekologisk compensation – Åtgärder för att motverka nettoförluster av biologisk mångfald och ekosystemtjänster, samtidigt som behovet av markexploatering tillgodoses (Swedish government inquiries: Ecological compensation – Actions to counteract net losses of biodiversity and ecosystem services, while meeting the need for development of land)*. Stockholm: Government of Sweden.

Swedish Rail Administration (2002) *Miljökonsekvensbeskrivning inom vägsektorn. Del 2 Metodik (Environmental impact statement in the road sector. Part 2 Methodology)*. Borlänge: Swedish Rail Administration.

Swedish Transport Administration (2019) *Regeringsuppdrag: Trafikverkets kulturmiljöstrategi (Government assignment: The STA's cultural environment strategy)*. Borlänge: STA.

Swedish Transport Administration (2021a) *Miljökompensation i transportinfrastruktur (Environmental compensation in transport infrastructure)*. Borlänge: STA.

Unesco, Iccrom, Icomos and IUCN (2022) *Guidance and Toolkit for Impact Assessments in a World Heritage Context*. Paris: Unesco; Rome: Iccrom; Charenton-le-Pont: Icomos; Gland: IUCN.

Unesco (2011) Recommendation on the Historic Urban Landscape. Paris: Unesco.

Urban Design Research Institute and Marg (2000). *Buildings of the Kala Ghoda Art District*. Mumbai: UDRI.

Urban Design Research Institute (2004) *The Gateway of India Precinct: a proposal for upgrading and managing the precinct*. Mumbai: UDRI.

Strategy and architectural documents

Abako Architects (2021) *Utredning för kompensation av kulturmiljö, Station Haga (Investigation for compensation of the "cultural environment", Haga Station)*. Gothenburg: STA and AGN.

City Museum (2006) *Västlänken - en tågtunnel under Göteborg. Järnvägsutredning inklusive miljökonsekvensbeskrivning. Program för detaljplaner (samråd) (Västlänken - a train tunnel under Gothenburg. Railway investigation including environmental impact statement. Programme for detailed plans (consultation).)*. Gothenburg: Gothenburg City cultural administration.

City Museum (2014) *PM, version 2 Åtgärdsförslag för Kungsparken/Nya Allén (PM, version 2 Action proposal for Kungsparken/Nya Allén)*. Gothenburg: Gothenburg City cultural administration.

City Museum (2017) *Göteborg förstärkt: Fästningsstaden (Gothenburg strengthened: The fortified city)*. Gothenburg: Gothenburg City cultural administration.

City Museum (2018) *Göteborg Förstärkt: Landerierna (Gothenburg Strengthened: The landeris)*. Gothenburg City cultural administration.

Swedish Transport Administration (2012) *Västlänken – PM kulturmiljö. Ärendenr: TRV 2011-6195 (The West Link – PM cultural environment- Case no.: TRV 2011-6195)*. Gothenburg: STA. (Accessed 30 November 2020).

Swedish Transport Administration (2015) *Åtgärdsprogram för bevarande av träd i parker och alléer under byggandet av Västlänken (Action program for the preservation of trees in parks and avenues during the construction of the West Link)*. Gothenburg: STA.

Swedish Transport Administration (2016a) *Handlingsplan för tillvaratagande av kulturmiljö (Action plan for the safeguarding of the "cultural environment")*. Gothenburg: STA.

Swedish Transport Administration (2016b) *Olskroken planskildhet och Västlänken: Bilaga 3 - Det gröna kulturarvet (Olskroken plan separation and the West Link: Appendix 1 – The green cultural heritage)*. Gothenburg: STA.

Swedish Transport Administration (2022) *Kulturmiljöåtgärder för program Västlänken (Cultural environment measures for the West Link programme)*. Gothenburg: STA.

Swedish Transport Administration (2023) *Kulturmiljöåtgärder för program Västlänken (Cultural environment measures for the West Link programme)*. Gothenburg: STA (Accessed 28 August 2023).

Swedish Transport Administration and Kanozi Architects (2020) *Kulturmiljö Väslänken (Cultural environment, West link)*. Gothenburg: STA.

Swedish Transport Administration and Kanozi Architects (2021) *Utredning kulturmiljö Korsvägen Station ("Cultural environment" investigation, Korsvägen Station)*. Gothenburg: STA.

Meeting minutes

Mumbai Heritage Conservation Committee (2013) 'Item 1: The Mumbai Metro Line project III (Colaba- Bandra-SEEPZ)'. *Minutes of MHCC meeting 8 November 2013*, Conference Hall of MHCC at 5th floor, MCGM Head Office, Annex Building, Mumbai.

Mumbai Heritage Conservation Committee (2013) 'Item 1: The Mumbai Metro Line project III (Colaba- Bandra-SEEPZ)'. *Minutes of MHCC meeting 26 November 2013*, Conference Hall of MHCC at 5th floor, MCGM Head Office, Annex Building, Mumbai.

Mumbai Heritage Conservation Committee (2014) 'Item 1: The Mumbai Metro Line project III (Colaba- Bandra-SEEPZ)'. *Minutes of MHCC meeting 8 January 2014*, Conference Hall of MHCC at 5th floor, MCGM Head Office, Annex Building, Mumbai.

Mumbai Heritage Conservation Committee (2014) 'Discussion regarding meeting with MMRDA Commissioner on 07.02.2014 about Metro Line 3 Project'. *Minutes of MHCC meeting 15 February 2014*, Conference Hall of MHCC at 5th floor, MCGM Head Office, Annex Building, Mumbai.

Mumbai Heritage Conservation Committee (2014) 'Item 2: Mumbai Metro Line III (Colaba-Bandra-Seepz) – Reply from the MMRDA Commissioner'. *Minutes of MHCC meeting 26 August 2014*, Conference Hall of MHCC at 5th floor, MCGM Head Office, Annex Building, Mumbai.

Mumbai Heritage Conservation Committee (2015) 'Item Ci: Hearing to the members of the J. N. Petit Library Trust'. *Minutes of MHCC meeting 7 April 2015*, Conference Hall of MHCC at 5th floor, MCGM Head Office, Annex Building, Mumbai.

Mumbai Heritage Conservation Committee (2018) 'Item 3: Proposed above ground structures for D.N.Road – Hutatma Chowk Station segment of Mumbai Metro Line 3'. *Minutes of MHCC meeting 31 July 2018*, Conference Hall of MHCC at 5th floor, MCGM Head Office, Annex Building, Mumbai.

Mumbai Heritage Conservation Committee (2018) 'Item 3: Proposed above ground structures for D.N.Road – Hutatma Chowk Station segment of Mumbai Metro Line 3'. *Minutes of MHCC meeting 31 October 2018*, Conference Hall of MHCC at 5th floor, MCGM Head Office, Annex Building, Mumbai.

Mumbai Heritage Conservation Committee (2019) 'Item 5: Item 3: Proposed above ground structures for D.N.Road – Hutatma Chowk Station segment of Mumbai Metro Line 3'. *Minutes of MHCC meeting 24 July 2019*, Conference Hall of MHCC at 5th floor, MCGM Head Office, Annex Building, Mumbai.

News media

Abrams, C. (2019) "You Have to Actually Cut Open Mumbai's Belly'—Inside One of the World's Most Audacious Transit Projects', 6 January. Available at: https://www.wsj.com/articles/through-monsoons-around-slums-under-templesmumbai-builds-its-first-subway-11546803877 (Accessed 20 January 2022).

Ather, S. (2023) 'Politics of ruin: Why Modi wants to demolish India's mosques', 3 April. Available at https://www.aljazeera.com/opinions/2023/4/3/politics-of-ruin-why-modi-wants-to-demolish-indias-mosques (Accessed 8 October 2023).

Baliga, L. (2019) 'Christian cemetery in Aarey realigned for Metro Bhavan', 18 October. Available at: https://mumbaimirror.indiatimes.com/mumbai/civic/christian-cemetery-in-aarey-realigned-for-metro-bhavan/articleshow/71640871.cms January 2022 (Accessed 8 October 2023).

Borpujari, P. (2019) 'Century-old housing in Mumbai succumbs to metro project', 14 July. Available at: https://www.aljazeera.com/features/2019/7/14/century-old-housing-in-mumbai-succumbs-to-metro-project (Accessed 13 July 2023).

Chatterjee, B. (2020) 'Maharashtra officially declares 328.9 hectare reserved forest at Aarey Colony in Mumbai', 9 October. Available at: https://www.hindustantimes.com/mumbai-news/maharashtra-officially-declares-328-9-hectare-reserved-forest-at-aarey-colony-in-mumbai/story-WfzJDKJliRQPQEOkoDQ2DJ.html (Accessed 8 November 2023).

D'Mello, A. (2009) 'Church groups against elevated Metro II route', 24 June. Available at: https://timesofindia.indiatimes.com/city/mumbai/church-groups-against-elevated-metro-ii-route/articleshow/4694321.cms (Accessed 30 January 2023).

Deshpande, S. (2018) 'Bombay HC allows Metro tunnelling under two fire temples', 30 November. Available at: https://timesofindia.indiatimes.com/city/mumbai/bombay-hc-allows-metro-tunnelling-under-two-over-century-old-fire-temples-in-mumbai/articleshow/66879247.cms (Accessed 17 July 2023).

DNA Correspondent (2019). 'Bombay High Court to take up a dozen petitions against Metro-3 today' 17 September. Available at: https://www.dnaindia.com/mumbai/report-bombay-high-court-to-take-up-a-dozen-petitions-against-metro-3-today-2790330 (Accessed 20 January 2022).

Express News Service (2015) 'Amid DP row, heritage panel gets a new chairman', 19 August. Available at: https://indianexpress.com/article/cities/mumbai/amid-dp-row-heritage-panel-gets-a-new-chairman/ (Accessed 15 October 2021).

FPJ Bureau (2019a) 'Does BMC care about Mumbai's heritage?', 1 June. Available at: https://www.freepressjournal.in/headlines/does-bmc-care-about-mumbais-heritage (Accessed 25 January 2022).

FPJ Bureau (2019b) 'MMRDA set to acquire Maheshwar temple plot', 2 June. Available at: https://www.freepressjournal.in/ujjain/mmrda-set-to-acquire-maheshwar-temple-plot (Accessed 25 January 2022).

Ganapatye, S. (2018) '63,000 forced out of homes by infra projects in 10 yrs', 22 June. Available at: https://mumbaimirror.indiatimes.com/mumbai/other/63000-forced-out-of-homes-by-infra-projects-in-10-yrs/articleshow/64688956.cms (Accessed 13 July 2023).

Johny, R.M. (2023), 6 April "Demolish Taj Mahal': Assam BJP MLA wants enquiry on Shah Jahan-Mumtaz love'. Available at: https://www.hindustantimes.com/india-news/not-love-symbol-assam-bjp-mla-seeks-taj-mahal-demolition-101680745296078.html (Accessed 8 October 2023).

Karkaria, B. (2017) "Dark forces will be unleashed': the fire temple v the Mumbai metro', *Guardian*, 14 December. Available at: https://www.theguardian.com/cities/2017/dec/14/metro-tunnel-mumbai-cricket-zoroastrian-india (Accessed 20 January 2022).

Kaskar, Z. (2023) "Maybe Metro Authorities Can Count Better': Aarey Resident Claims 'Close to 500 Trees' Were Axed', 29 April. Available at: https://thewire.in/environment/aarey-trees-felled-metro (Accessed 1 October 2023).

Kolachalam, N. (2022) 'Mumbai's Aarey Colony - 3,000 Acres And A Metro Project', 21 September. Available at: https://www.ndtv.com/india-news/mumbais-green-lung-aarey-forest-runs-into-the-metro-project-3365100 (Accessed 1 October 2023).

Kulkarni, V. (2018) 'How a citizen-led initiative in Mumbai led to an Unesco World Heritage site inscription' 8 July. Available at: https://www.thenationalnews.com/arts-culture/art/how-a-citizen-led-initiative-in-mumbai-led-to-an-unesco-world-heritage-site-inscription-1.748074 (Accessed 10 October 2023).

Livemint (2022) 'Aarey colony controversy: SC allows Mumbai Metro to cut 84 tress [sic]', 29 November. Available at: https://www.livemint.com/news/india/aarey-colony-controversy-sc-allows-mumbai-metro-to-cut-84-tress-11669719561784.html (Accessed 1 October 2023).

Mehta, M. (2019) 'Mumbai: Parsi community gets partial relief; metro station to shift away from fire temple', 28 January. Available at: https://timesofindia.indiatimes.com/city/mumbai/mumbai-parsi-community-gets-partial-relief-metro-rail-authority-informs-sc/articleshow/67728206.cms (Accessed 13 July 2023).

Mehta, M.M. and Jain, B. '30 buildings make way for two Metro stations and three highrises', 18 March. Available at: https://timesofindia.indiatimes.com/city/mumbai/30-buildings-make-way-for-two-metro-stations-and-three-highrises/articleshow/68457034.cms (Accessed 13 July 2023).

Mulye, P. (2017) 'Mumbai's heritage structures fear Metro III will dent them', *ichangemycity*, 18 January. Available at: https://www.ichangemycity.com/mumbai/news/mumbais-heritage-structures-fear-metro-iii-will-dent-them#! (Accessed 20 April 2020).

Naik, Y. (2016) 'Mumbai: MMRDA to cut mangroves on 1 hectare for Metro station', 15 June. Available at: https://indianexpress.com/article/cities/mumbai/mumbai-mmrda-to-cut-mangroves-on-1-hectare-for-metro-station-7359318/ (Accessed 2 October 2023).

Narain Lambah (2009) 'Holding on to old Mumbai', 6 December. Available at: https://www.theguardian.com/world/2009/dec/06/india-architecture (Accessed 15 April 2021).

Pandey, S. (2022) 'It was Babri Masjid in 1992, Gyanvapi Mosque will be demolished in 2022: BJP leader' 10 May. Available at: https://www.deccanherald.com/india/it-was-babri-masjid-in-1992-gyanvapi-mosque-will-be-demolished-in-2022-bjp-leader-1108041.html (Accessed 8 October 2022).

Phadke, M. (2012) 'Temple,mosque in Metro right of way', 17 September. Available at: https://indianexpress.com/article/cities/mumbai/temple-mosque-in-metro-right-of-way/ (Accessed 15 January 2022).

Phadke, M. (2022) 'Among Shinde's 1st moves as CM — scrapping Aarey Metro shed relocation he backed as Uddhav mantri' 1 July. Available at: https://theprint.in/politics/among-shindes-1st-moves-as-cm-scrapping-aarey-metro-shed-relocation-he-backed-as-uddhav-mantri/1020194/ (Accessed 11 August 2023).

Purohit, K. (2015) 'Heritage precincts can have towers: Mumbai's draft DP', 30 March. Available at: https://www.hindustantimes.com/mumbai/heritage-precincts-can-have-towers-mumbai-s-draft-dp/story-yuIiWiGKLYgWLaTvvS3lUO.html (Accessed 27 September 2023).

Rawal, S. (2020) 'Aarey shed moved, no extra cost: Govt', 12 October. Available at: https://www.hindustantimes.com/india-news/aarey-shed-moved-no-extra-cost-govt/story-07mjFpkutAOkogWlJQBKbO.html (Accessed 27 September 2023).

Sarkar, G. (2018) 'Mumbai: Will Metro III tunnel be moved by another 4 meters to save Parsi temple?' 17 July. Available at: https://www.mid-day.com/mumbai/mumbai-news/article/Mumbai-Will-Metro-III-tunnel-be-moved-by-another-4-meters-to-save-Parsi-temple-19612162 (Accessed 13 November 2023).

Shantha, S. (2019) 'Mumbai's People, and the Environment, Are Paying for the City's 'Development", 4 July. Available at: https://thewire.in/urban/mumbai-bullet-train-metro-3-coastal-road (Accessed 2 October 2023).

Shelar, J. (2017) 'Metro authorities relocate holy cross in Mahim', 20 June. Available at: https://www.thehindu.com/news/cities/mumbai/metro-authorities-relocate-holy-cross-in-mahim/article19105682.ece (Accessed 20 January 2022).

Times News Network (2013) 'Cabinet clears Mumbai Metro's third line', *Times of India*, 29 June. Available at: https://timesofindia.indiatimes.com/business/india-business/Cabinet-clears-Mumbai-Metros-third-line/articleshow/20826251.cms (Accessed 31 May 2022).

Times News Network (2014) 'Metro III hopes for speedy nods after puja today', *Times of India*, 26 August. Available at: https://timesofindia.indiatimes.com/City/Mumbai/Metro-III-hopes-for-speedy-nods-after-puja-today/articleshow/40875769.cms (Accessed 31 May 2023).

Times News Network (2019) 'Metro to cross over Mankhurd cemetery, locals say won't vote', 25 April. Available at: https://timesofindia.indiatimes.com/city/mumbai/metro-to-cross-over-mankhurd-cemetery-locals-say-wont-vote/articleshow/69032018.cms January 2022)

Vasudevan, V. (2015) 'Mumbai to be left without a heritage conservation body soon', 13 July. Available: https://www.hindustantimes.com/mumbai/mumbai-to-be-left-without-a-heritage-conservation-body-soon/story-cVDCA1u1cv8Ch9w3cKBhmI.html2022 (20 October 2021).

Venkatraman, T. (2017) 'Metro-3 stations to showcase Mumbai's rich culture, heritage', 16 December. Available at: https://www.hindustantimes.com/mumbai-news/metro-3-stations-to-showcase-mumbai-s-rich-culture-heritage/story-9xcsetoTDTJ61SeyHsxiHL.html (Accessed 4 November 2023).

Venkatraman, T. (2018) 'Art set to make a stop at every Metro station in Mumbai', 19 November. Available at: https://www.hindustantimes.com/mumbai-news/art-set-to-make-a-stop-at-every-metro-station-in-mumbai/story-QcceTtEmzzJ5Bl6sO7TOnL.html (Accessed 4 November 2023).

Websites

Abha Narain Lambah and Associates (2013) *Design For Mumbai Metro Line 3*. Available at: https://www.anlassociates.com/urban/design-for-mumbai-metro-line-3/ (Accessed 9 May 2021).

Abha Narain Lambah and Associates (n.d.) *Awards*. Available at: https://www.anlassociates.com/award/ (Accessed 2 October 2023).

Arkeologerna (2017) *Mur från Gullbergs fäste dokumenteras (Wall from Gullberg fortress is being documented)*. Available at: https://arkeologerna.com/bloggar/arkeologi-i-goteborg/mur-fran-gullbergs-faste-dokumenteras/ (Accessed 30 September 2021).

Bengt A. Lundberg/National Heritage Board, CC BY 2.5, via Wikimedia Commons (2019) *Gustaf Adolf's square*. Available at:

https://commons.wikimedia.org/wiki/File:G%C3%B6teborg_-_KMB_-_16001000313647.jpg (Accessed 14 November 2023).

Det Gamla Göteborg (2018) *Kvarteret Franska tomten (The french plot)*. Available at: https://gamlagoteborg.se/2018/01/10/kvarteret-franska-tomten/ (Accessed 19 September 2023).

Dr. Raju Kasambe, CC BY-SA 4.0, via Wikimedia Commons (2023) *Chhatrapati Shivaji Terminus*. Available at: https://commons.wikimedia.org/wiki/File:Chhatrapati_Shivaji_Maharaj_Terminus_CSMT_Mumbai_best_IMG_20230814_01.jpg (Accessed 14 November 2023).

Environmental Protection Agency (n.d.). *Ekosystemtjänster (Ecosystem services)*. Available at: https://www.naturvardsverket.se/ekosystemtjanster (Accessed 26 May 2023).

Heriland (2020a) *Project Design*. Available at: https://www.heriland.eu/project-design/ (Accessed 30 October 2023).

Heriland (2020b). *Secondments*. Available at: https://www.heriland.eu/faq/secondments/ (Accessed 1 August 2022).

Hesekiel, CC BY 4.0, via Wikimedia Commons (2015) *Johannebergs landeri*. Available at: https://commons.wikimedia.org/wiki/File:Johannebergs_landeri,_2015.jpg (Accessed 14 November 2023).

Intach (2014) *Charter for the Conservation of Unprotected Architectural Heritage and Sites in India*. Available at: https://architexturez.net/doc/az-cf-21208 (Accessed 10 October 2023).

Menon, A.G.K (2017b) *The complexity of Indian urbanism*. Available at: https://www.india-seminar.com/2007/579/579_a_g_krishna_menon.htm (Accessed 11 May 2021).

Mumbai Metro Rail Corporation Limited (2023a) *Know your metro*. Available at: https://mmrcl.com/en/about-mmrc/know-your-metro (Accessed 31 May 2023).

Mumbai Metro Rail Corporation Limited (2023b) *Map of the metro*. Available at: https://mmrcl.com/map/ (Accessed 31 May 2023).

Mumbai Metropolitan Region Development Authority Archive (2012) *Mumbai Metro Rail Project*. Available at: https://web.archive.org/web/20120319164955/http://202.54.119.40/projects_metro_rail.htm (Accessed 31 May 2023).

Mumbai Metropolitan Region Development Authority (2023) *Metro PIU*. Available at: https://mmrda.maharashtra.gov.in/metro-piu (Accessed 31 May 2023).

Narain Lambah (n.d.) *Heritage Streetscape*. Available at: https://www.india-seminar.com/2004/542/542%20abha%20narain%20lambah.htm (Accessed 2 October 2023).

National Board of Housing, Building and Planning (2018). *Frivillig ekologisk kompensation i planering och byggande (Voluntary ecological compensation in planning and construction)*. Available at: https://www.boverket.se/sv/PBL-kunskapsbanken/teman/ekosystemtjanster/verktyg/kompensation/ (Accessed 21 July 2020).

National Board of Housing, Building and Planning (2022). *Riksintressen är nationellt betydelsefulla områden (National interests are areas of national importance)*. Available at: https://www.boverket.se/sv/samhallsplanering/sa-planeras-sverige/nationell-planering/riksintressen-ar-betydelsefulla-omraden/ (Accessed 30 September 2023).

National Heritage Board (2021) *Definition av kulturarv och kulturmiljö (Definition of cultural heritage and cultural environment)*. Available at: https://www.raa.se/kulturarv/definition-av-kulturarv-och-kulturmiljo/ (Accessed 20 May 2023).

National Heritage Board (n.d.) *Kulturreservat (Culture reserves)*. Available at: https://www.raa.se/kulturarv/landskap/kulturreservat/ (Accessed 22 October 2023).

The Nature Conservancy (2023) *The Importance of Mangroves*. Available at: https://www.nature.org/en-us/about-us/where-we-work/united-states/florida/stories-in-florida/why-mangroves-important/ (Accessed 2 October 2023).

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Piramal Mahalaxmi (2023) The Mahalaxmi Racecourse, Mumbai. Available at: https://www.piramalmahalaxmi.com/mahalaxmi-racecourse/ (Accessed 8 August 2023).

Rangan Datta Wiki, CC BY-SA 4.0, via Wikimedia Commons *Panorama of Flora Fountain*. Available at: https://commons.wikimedia.org/wiki/File:Flora_Fountain_Pano.jpg (Accessed 14 November 2023).

Save Aarey (2017) *Save Aarey Movement*. Available at: http://aareyconservationgroup.org/save-aarey-movement/ (Accessed 1 October 2023).

Shetty, P. (2004) *Rethinking Heritage: The Case of Heritage Conservation in Mumbai*. Available at: https://bardstudio.in/rethinking-heritage/ (Accessed 27 February 2021).

Swedish Transport Administration (2021b) *The West Link Project – Västlänken*. Available at: https://bransch.trafikverket.se/en/startpage/projects/Railway-construction-projects/The-West-Link-ProjectVastlanken/ (Accessed 29 May 2023).

Swedish Transport Administration (2022b) *Västsvenska paketet (The West Sweden packet)*. Available at: https://bransch.trafikverket.se/vastsvenskapaketet (Accessed 29 May 2023).

Swedish Transport Administration (n.d.) *Västlänken (The West Link)*. Available at: https://www.trafikverket.se/vara-projekt/projekt-i-vastra-gotalands-lan/vastlanken/ (Accessed 29 May 2023).

Udaykumar PR, via Wikimedia Commons (2012) *D.N.Road Mumbai*. Available at: https://commons.wikimedia.org/wiki/File:D.N.Road_Mumbai_-_panoramio_(43).jpg (Accessed 14 November 2023).

University of Gothenburg (2019). *Open Positions. Doctoral Student in Conservation: Heritage development in large scale infrastructural project – a collaborative and trans-disciplinary approach*. Available at: https://www.gu.se/english/about_the_university/job-opportunities/vacancies-details/?id=3657 (link expired) (Accessed 27 March 2019).

Oxford English Dictionary (1989) *compensate, v.* Available at: https://www.oed.com/oed2/00045500 (Accessed 30 May 2023).

urbzoo, CC BY 2.0, via Wikimedia Commons (2016) *Khotachiwadi Backstreets and Chawls*. Available at: https://commons.wikimedia.org/wiki/File:Khotachiwadi_Backstreets_and_Chawls_(26145310951).jpg (Accessed 14 November 2023).

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Large planning projects in old cities often lead to the loss of historic environments. Public actors face the challenge of meeting both conservation needs as well as planning needs. This thesis starts from an understanding of conservation as the dynamic management of change. It explores "compensation" for the loss of historic environments as a response to urban planning projects. It delves into law and policy, theory, and practice, and studies two large infrastructure projects – the West Link train tunnel in Gothenburg, Sweden, and the Mumbai Metro, in Mumbai, India.

Compensation is found to be inadequate in law, policy, and theory. In practice, as the West Link shows, it can be a creative and change-oriented response. It can take the form of conveying stories about the old city through signage, design elements, displaying excavated remains, as well as creating entirely new urban spaces and programmes. The response found in the Mumbai Metro is one of physical preservation of the affected historic environment. Both compensation and preservation are largely steered by experts who interpret the historic environment. The responses are further entangled in complex planning processes, and therefore mediated by institutional and regulatory frameworks, a range of actors and approaches, and several constraints. Against this background, change-oriented conservation is often a challenge. Nevertheless, compensation offers a dynamic alternative to managing the loss of historic environments in moments of major urban transformation.

Maitri Dore holds a Bachelor's degree in Architecture from Mumbai University, and a Master's degree in Urban Studies through the Erasmus Mundus+ 4Cities programme. This is her doctoral thesis.

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